

# SPRING BOX

RFB # 0018-14-AM

BERNALILLO COUNTY, NEW MEXICO

PREPARED BY: INTERA INC.

IN COOPERATION WITH: CHAVEZ-GRIEVES CONSULTING ENGINEERS; LARRY D. READ & ASSOCIATES, INC.; MORROW REARDON WILKINSON MILLER LTD., LANDSCAPE ARCHITECTS

PREPARED FOR: BERNALILLO COUNTY PARKS AND RECREATION DEPARTMENT

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## SUP1 - SPRING BOX ISOMETRIC

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS PRIOR TO START OF CONSTRUCTION.
  2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
  3. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS THAT FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE DESIGN. SUCH CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY NECESSARY REVISIONS.
  4. THE SPRING BOX AND APPURTENANT FEATURES SHALL BE CONSTRUCTED IN MATERIAL CONFORMANCE TO THE DRAWINGS - ANY VARIATION FROM THE APPROVED DESIGN SHALL BE MADE ONLY AFTER DOCUMENTED APPROVAL FROM THE ENGINEER.
  5. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL CLEAN AND PICK UP THE WORK AREA. AT NO TIME SHALL THE WORK BE LEFT IN A MANNER THAT COULD ENDANGER WORKERS, LIVESTOCK, WILDLIFE, OR THE PUBLIC.
  6. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO PROJECT PLANS, AS AMENDED AND REVISED BY THE ENGINEER. ALL DETAILS SHOULD BE CONSIDERED APPROXIMATE OF ACTUAL CONDITIONS, AND MAY BE CHANGED TO BETTER FIT THE ACTUAL CONDITIONS UPON THE DIRECTION BY THE ENGINEER.
  7. THE ENGINEER HAS COMPLETED THE DESIGN FOR THE SPRING BOX SO THAT EXISTING SITE FEATURES ARE MINIMALLY DISTURBED. IN CONSIDERATION OF NOTE 9 ON THIS SHEET, THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF EXCESSIVELY DISTURBED OR DESTROYED EXISTING AND ESTABLISHED VEGETATION. THE CONTRACTOR SHALL ALSO EMPLOY MEANS AND METHODS OF CONSTRUCTION SO THAT THE EXISTING SITE FEATURES ARE MINIMALLY DISTURBED AND THE SITE MAINTAINS THE MATURE LOOK OF THE EXISTING SPRING SITE FEATURES.
  8. A TRAIL CONSTRUCTION PROJECT PERFORMED UNDER SEPARATE CONTRACT MAY OCCUR CONCURRENTLY WITH THIS WORK AT A DIFFERENT LOCATION AT THE CARLITO SPRINGS OPEN SPACE, WHILE THAT PROJECT WILL NOT OCCUPY THE SAME SITE AS THIS WORK, THE OWNER EXPECTS BOTH CONTRACTORS TO WORK COOPERATIVELY TO NO IMPEDE ROAD ACCESS TO EITHER WORK SITE.
  9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR SAFE WORKING CONDITIONS IN CONFORMANCE WITH OSHA REQUIREMENTS. THE ENGINEER HAS COMPLETED A DESIGN THAT RESULTS IN STABLE FINAL SITE CONDITIONS, BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE WORKING CONDITIONS, USING APPROPRIATE MEANS AND METHODS OF CONSTRUCTION, AND IN CONSIDERATION OF A VERY TIGHT WORKING AREA AND STEEP SLOPES SURROUNDING THE EXISTING SPRING FACE. THE CONTRACTOR SHALL NOTIFY AND WORK WITH THE OWNER AND ENGINEER IN THE EVENT THERE IS CONFLICT BETWEEN MEETING THESE REQUIREMENTS AND THE REQUIREMENTS OF NOTES 7, 11 AND 13 ON THIS SHEET, TO ENSURE A SAFE WORKING ENVIRONMENT DURING CONSTRUCTION.
  10. IN EXECUTION OF CONSTRUCTION, CONTRACTOR AND ANY SUBCONTRACTORS SHALL BE DILIGENT IN MAINTAINING ESTABLISHED VEGETATION AT THE SITE, AND SHALL NOT EXCAVATE, CLEAR, GRUB, OR OTHERWISE DISTURB AREAS THAT ARE NOT THE IMMEDIATE FOCUS OF THIS CONSTRUCTION PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR RECLAMATION (RE-SEEDING) OF ANY AREAS DEEMED BY OWNER AND/OR ENGINEER TO BE EXCESSIVELY DISTURBED BY THE CONTRACTOR DURING SPRING BOX CONSTRUCTION.
  11. A LIMITED SUBSURFACE SOIL INVESTIGATION HAS BEEN CONDUCTED, AND THE 30% DESIGN DEVELOPMENT REPORT (30% DDR), INCLUDED AS ATTACHMENT A TO THE SPECIFICATIONS WHICH CONTAINS SPECIFIC INFORMATION ABOUT SUBSURFACE CONDITIONS AT THE SITE IS AVAILABLE FOR EXAMINATION BY THE CONTRACTOR. APPENDIX A OF THE 30% DDR, "TEST PIT LOGS, PHOTOGRAPHS, AND GEOTECHNICAL LABORATORY REPORT" INCLUDES THIS INFORMATION. THE CONTRACTOR MAY REFERENCE OTHER SECTIONS OF THE 30% DDR FOR USEFUL INFORMATION. IN PARTICULAR, SECTION 3.1 "GEOTECHNICAL" MAY BE REFERENCED, BUT IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM FIELD CONDITIONS PRIOR TO CONSTRUCTION.
  12. THE CONTRACTOR SHALL IN NO WAY DISTURB OR ALTER ANY WATER COURSE ON OR ADJOINING THE JOB SITE EXCEPT AS NOTED IN THE DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNAUTHORIZED DISTURBANCE OR ALTERATION OF ANY WATER COURSE TO THE BERNALILLO COUNTY PARKS AND RECREATION DEPARTMENT.
  13. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONDITION OF ALL ACCESS ROADS DURING CONSTRUCTION AND ANY DAMAGE MUST BE REPAIRED WHEN CONSTRUCTION IS COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST TO BERNALILLO COUNTY.
  14. THE CONTRACTOR SHALL NOT ALLOW ANY LITTER, CONSTRUCTION DEBRIS, OR POLLUTANTS TO ENTER ANY WATER COURSE ON THE JOB SITE.
  15. WILDLIFE, INCLUDING BLACK BEAR (ESPECIALLY DURING THE FALL MONTHS), ARE KNOWN TO FREQUENT THE JOB SITE. RATTLESNAKES HAVE BEEN NOTED TO BE PRESENT IN AND AROUND THE SPRINGHEAD. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORKER SAFETY AT THE SITE.
  16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR DIVERSION OF SPRINGFLOW AROUND THE CONSTRUCTION AREAS AS REQUIRED UNTIL CONSTRUCTION IS COMPLETED AND THE SPRING BOX IS FUNCTIONAL. IN CONSIDERATION OF NOTES 11 AND 13 ON THIS SHEET, THE CONTRACTOR SHALL WORK WITH THE OWNER AND ENGINEER TO DEVELOP AND IMPLEMENT REQUIRED DIVERSION MEASURES. WATER DIVERTED FROM THE SPRING FOR CONSTRUCTION MUST RE-ENTER THE SPRING CHANNEL DOWNSTREAM OF THE WORK AREA. IT IS ACCEPTABLE TO TEMPORARILY CUT OFF SUPPLY TO THE CISTERN DURING CONSTRUCTION. IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL A SHOP DRAWING DETAILING A PLAN TO DIVERT SPRING FLOW AROUND THE CONSTRUCTION AREA AS REQUIRED.

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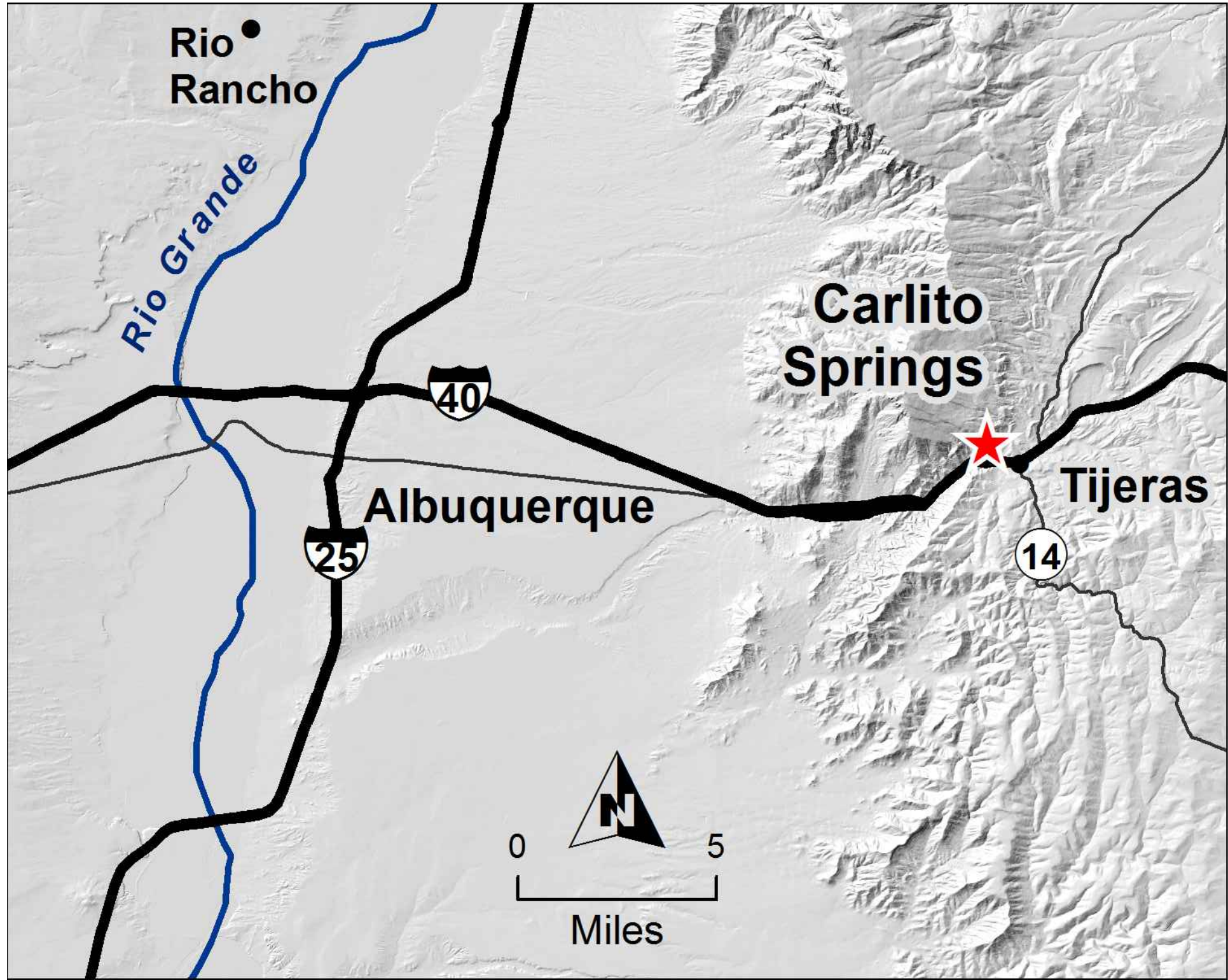


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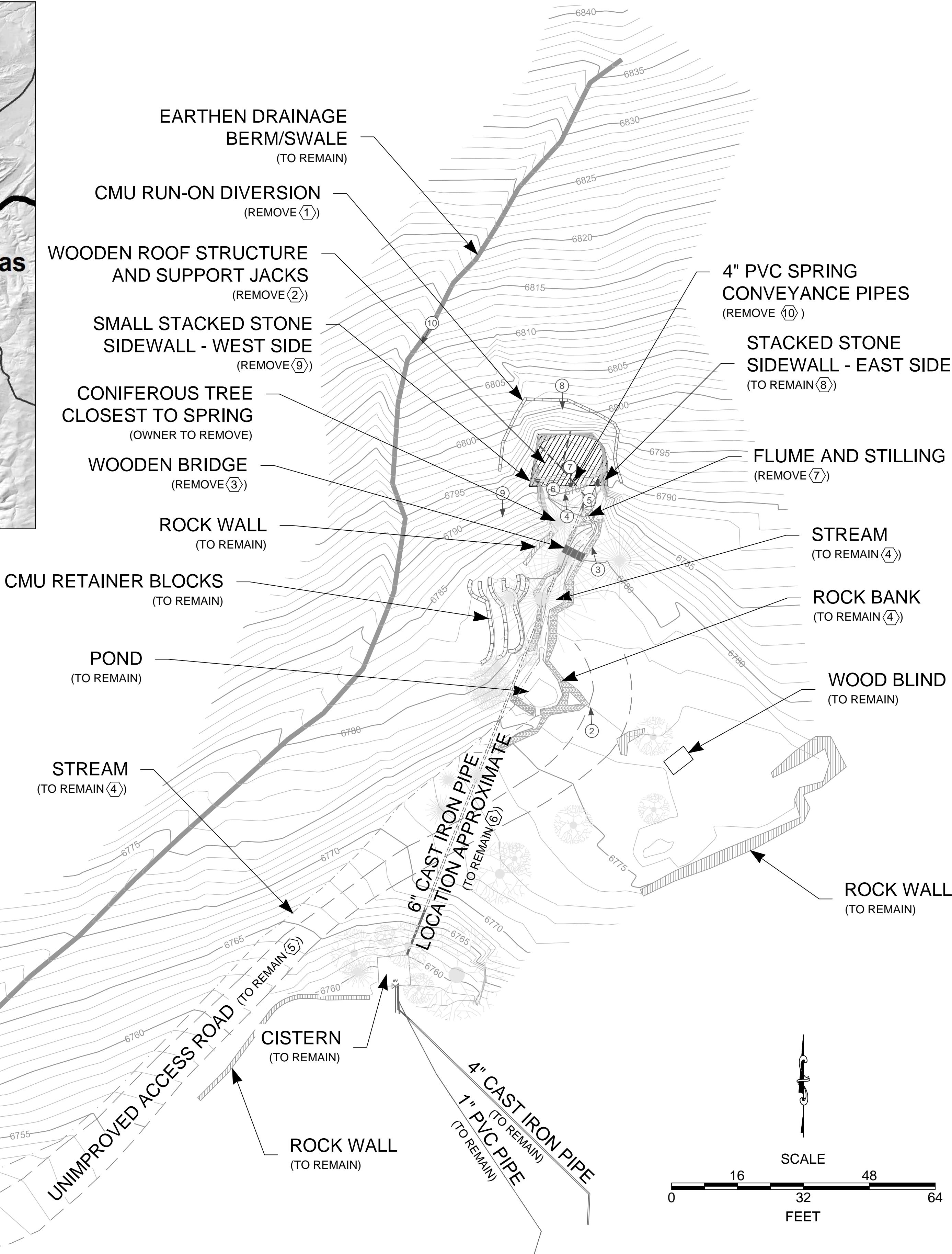
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NOTES

- CONIFEROUS TREE (TRUNK DRAWN TO SCALE)
- DECIDUOUS TREE (TRUNK DRAWN TO SCALE)
- NOTE: CONTRACTOR SHALL PROTECT ALL TREES (EXCEPT TREE CLOSEST TO SPRING; TO BE REMOVED BY OWNER), INCLUDING OUTER BARK, FROM DAMAGE DURING CONSTRUCTION
- AS-BUILT PHOTOGRAPH LOCATION AND NUMBER (SEE SHEET C102)  
NOTE: ARROW POINTS IN DIRECTION PHOTOGRAPH IS TAKEN



KEYED NOTES

- EXISTING CMU BLOCKS MAY REMAIN DURING CONSTRUCTION FOR USE AS BMP, AS APPROPRIATE, TO MEET ANY REQUIREMENTS OF A CONSTRUCTION SWPPP (IF NECESSARY). PRIOR TO COMPLETION OF CONSTRUCTION, REMOVE EXISTING CMU BLOCKS AND ANY ASSOCIATED MORTAR/CONCRETE AND PROPERLY DISPOSE OF. REPLACE CMU RUN-ON DIVERSION WITH EARTHEN RUN-ON DIVERSION BERM/SWALE AS PART OF FINAL SITE GRADING PLAN AS SHOWN ON SHEET C107.
- EXISTING WOODEN ROOF STRUCTURE AND SUPPORT JACKS ARE TO BE REMOVED, AND SUPPORT JACKS RETURNED TO OWNER, BUT MAY REMAIN DURING CONSTRUCTION AS DESIRED BY THE CONTRACTOR. ANY USE OF THE EXISTING STRUCTURES ARE AT THE SOLE DISCRETION OF THE CONTRACTOR - NEITHER THE ENGINEER NOR OWNER NECESSARILY RECOMMEND OR ENDORSE THE USE OF THE STRUCTURES AS PART OF SAFETY SYSTEMS DURING CONSTRUCTION OF THE SPRING BOX.
- EXISTING WOODEN FOOT BRIDGE MAY REMAIN DURING CONSTRUCTION AT THE DISCRETION OF THE CONTRACTOR. PRIOR TO COMPLETION OF CONSTRUCTION, REMOVE EXISTING WOODEN BRIDGE AND PROPERLY DISPOSE OF. REPLACE WOODEN BRIDGE WITH EXISTING NATIVE ROCK AS DIRECTED BY OWNER AND/OR ENGINEER.
- MAINTAIN AND DO NOT DAMAGE EXISTING STREAM AND ASSOCIATED BANK/CHANNEL FEATURES (SEE GENERAL NOTES 11 AND 13, COVER SHEET). CONTRACTOR IS REQUIRED TO CHECK THE STREAM CHANNEL WITHIN THE WORK SITE DAILY FOR CONSTRUCTION AND NATURAL DEBRIS THAT COULD CLOG STREAM CHANNEL AND CAUSE THE WATER TO OVERTOP THE BANKS.
- CONTRACTOR SHALL USE AND MAINTAIN THE EXISTING ACCESS ROAD TO THE WORK AREA. CONTRACTOR SHALL REPAIR ANY DAMAGE (I.E., RUTTING) TO THE ROAD. GRAVEL OR OTHER MATERIAL SHALL BE PLACED TEMPORARILY DURING CONSTRUCTION AT THE CORNER OF THE ACCESS ROAD, WHERE THE SOIL TENDS TO BE DAMP, TO REDUCE DAMAGE TO THE ROAD (PHOTOGRAPHY LOCATION 1, THIS SHEET AND C102). IF USED, SUCH MATERIAL MUST BE REMOVED BY THE CONTRACTOR WHEN CONSTRUCTION IS COMPLETED.
- ABANDON EXISTING CAST IRON PIPE IN-PLACE BY PERMANENTLY SEALING BOTH THE INLET AT THE SPRING AND OUTLET AND THE CISTERN AT THE DIRECTION OF THE OWNER OR ENGINEER. PORTIONS OF THIS PIPE MAY NEED TO BE REMOVED BY THE CONTRACTOR TO INSTALL NEW PIPE, AT NO ADDITIONAL COST TO THE OWNER.
- EXISTING FLUME AND STILLING WELL SHALL BE CAREFULLY REMOVED BY CONTRACTOR PRIOR TO CONSTRUCTION AND RETURNED TO OWNER. OWNER TO REINSTALL AFTER CONSTRUCTION IS COMPLETE.
- THE EXISTING STACKED-STONE SIDEWALL OF THE EXISTING SPRING COVE SHALL REMAIN AND BECOME PART OF THE IMPROVED SPRING AREA AND NEW SPRING BOX AS SHOWN ON SHEETS C104, C106, C107 AND C109. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE OR ALTER THE STACKED STONE WALL DURING CONSTRUCTION.
- STACKED STONE EXISTS IN A VERY LIMITED AREA ON THE WEST SIDE OF THE EXISTING SPRING COVE (SEE PHOTOGRAPHS 4 AND 7, SHEET C102). THE EXISING STACKED STONE MAY BE REMOVED BY THE CONTRACTOR FOR RE-USE IN CONSTRUCTING A STACKED STONE WALL ON THE WEST SIDE OF THE SPRING COVE, SIMILAR TO THE WALL ON THE EAST SIDE OF THE SPRING COVE. TO BECOME PART OF THE IMPROVED SPRING AREA AND NEW SPRING BOX AS SHOWN ON SHEETS C104, C106, C107 AND C109.
- EXISTING PVC SPRING CONVEYANCE PIPES ARE TO BE REMOVED, BUT MAY REMAIN DURING CONSTRUCTION AS DESIRED BY THE CONTRACTOR FOR USE IN DIVERTING THE SPRINGFLOW AROUND THE WORK AREA DURING CONSTRUCTION (SEE GENERAL NOTE 14, COVER SHEET).

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PROJECT NO: BERNC.C001.CRLTO Task 2	SHEET: C101

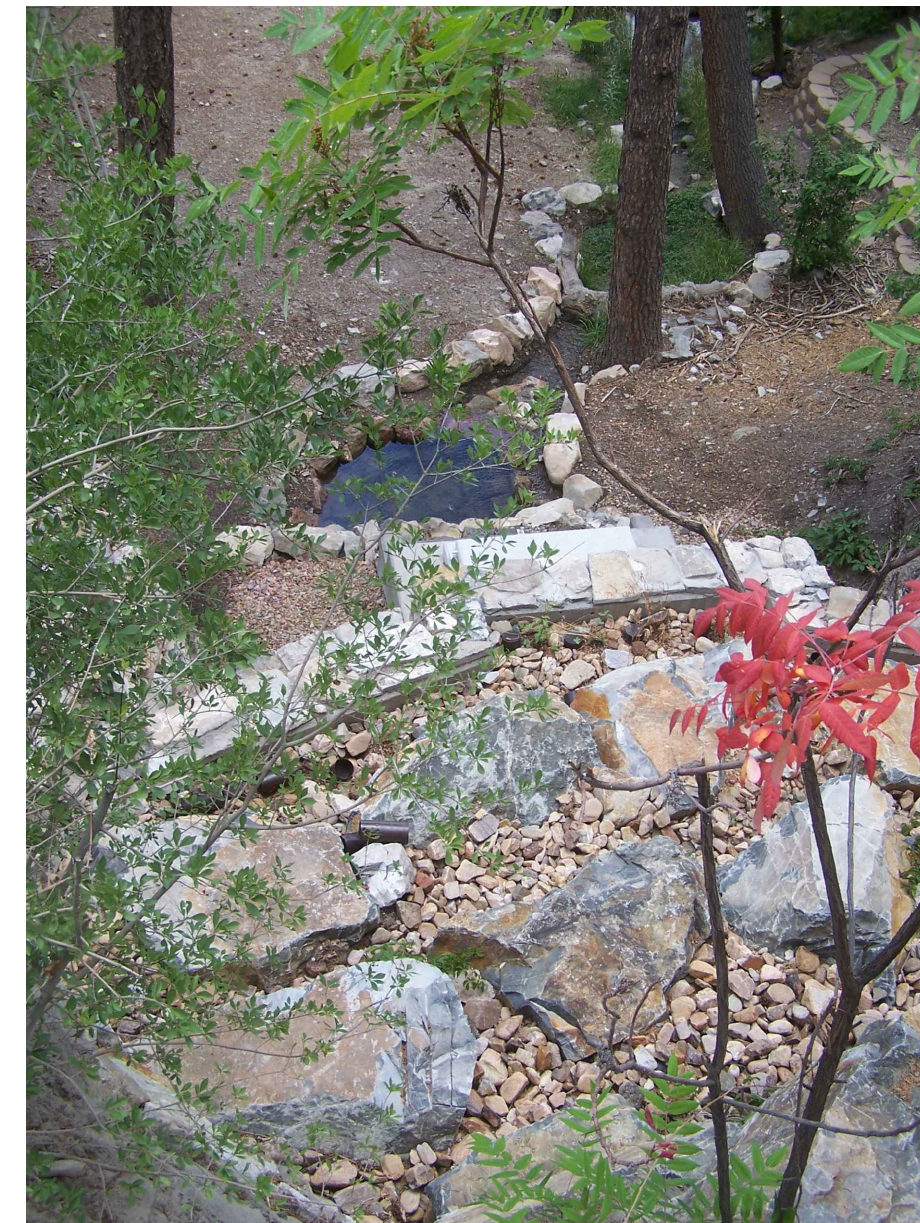
SURVEY INFORMATION / BENCH MARKS

ENGINEER SEAL

REVISIONS		DESIGN	
NO.	DATE	REMARKS	BY
1	10/3/14	AS-BUILT RECORD	LMC
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- This map complies with National Map Accuracy Standards based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.
- Aerial Photography exposed on October 31, 2011 by New Mexico Aerial Surveys, Inc., Albuquerque, NM, using a Zeiss Top 15 aerial mapping camera with a calibrated focal length of 152.4 mm.
- Digital file and Orthophoto produced by Thomas R. Mann & Assoc., Inc., Albuquerque, NM.
- 200 grid based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.
- Coordinates are ground modified New Mexico State Plane Coordinates East Zone, NAD 83 (NRS2007), and have been adjusted to the NGS GPS Control Point "JALAIR". To obtain true State Plane grid coordinates, multiply coordinates by project average combined factor CF=0.99985453. Elevations are NAVD 88, and have been adjusted to the NGS 1st order benchmark "Z 353". Coordinates and elevations are expressed in U.S. Survey Feet.





## NOTES

1. SEE SHEET C101 FOR PHOTO LOCATIONS.

AS-BUILT

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CARLITO SPRINGS OPEN SPACE  
SPRING BOX

PHOTOS - EXISTING SITE CONDITIONS

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FILE:  
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PROJECT NO:  
BERNC.C001.CRLTO Task 2

SHEET:  
C102

SURVEY INFORMATION / BENCH MARKS

**SURVEY INFORMATION / BENCH MARKS**

1) This map complies with National Map Accuracy Standards based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.

2) Aerial photography exposed on October 31, 2011 by Mexico Aerial Surveys, Inc., Albuquerque, NM, using a Zeiss Top 15 aerial mapping camera with a calibrated focal length of 152.756 mm.

3) Digital files and Orthophoto produced by Thomas R. Mann & Assoc., Inc., Albuquerque, NM.

4) 2007 ground based field survey data furnished by Surveying Control, Inc., Albuquerque, NM.

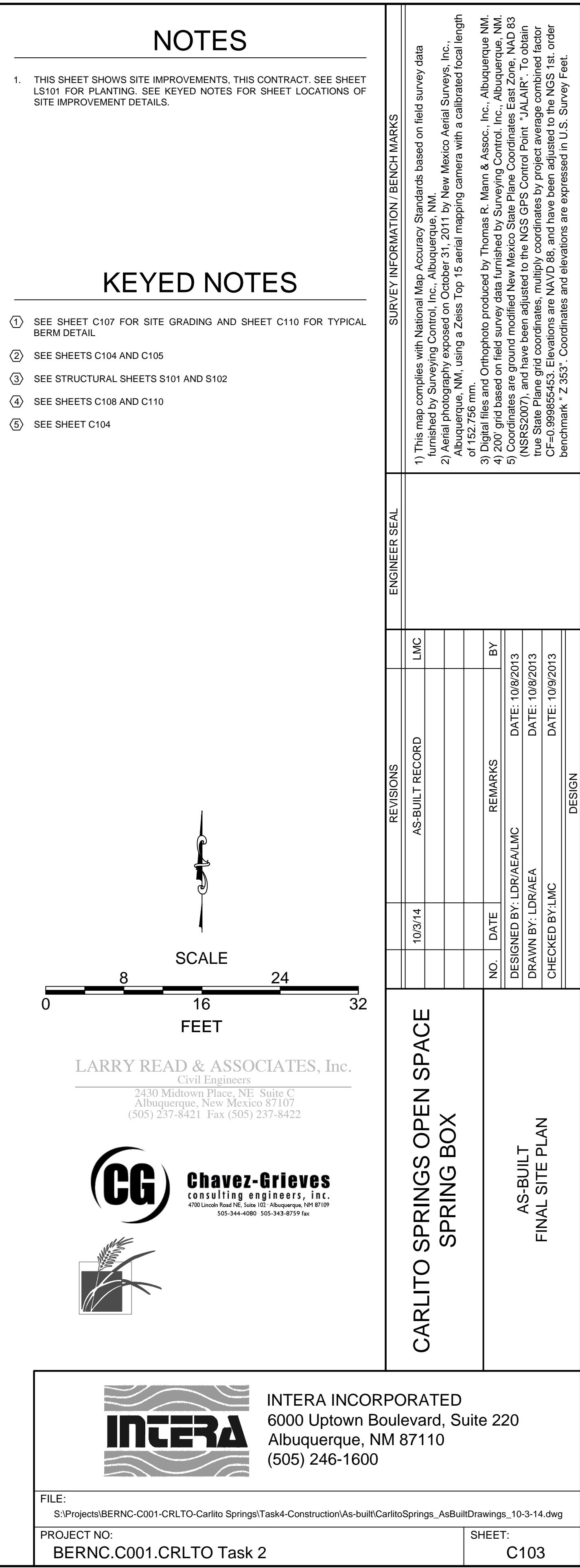
5) 2007 ground based field survey data furnished by Surveying Control, Inc., Albuquerque, NM.

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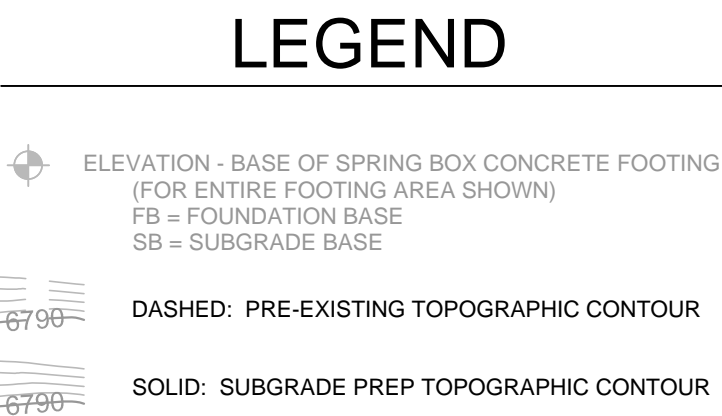
ENGINEER SEAL

			REVISIONS	
	10/31/14		AS-BUILT RECORD	LWC
NO.	DATE	REMARKS	BY	
		DESIGNED BY: LMC/AEA	DATE: 10/8/2013	
		DRAWN BY: AEA	DATE: 10/8/2013	
		CHECKED BY: LMC	DATE: 10/9/2013	
			DESIGN	









1. SEE SHEETS S101 AND S102 FOR SPRING BOX PLAN.
2. THE AREA TO BE EXCAVATED TO SUBGRADE FOR THE SPRING BOX AND ASSOCIATED RETAINING WALLS AND FOOTINGS IS VERY IRREGULAR AND CONSISTS OF VARIABLE MATERIAL TYPES AND SIZES. SUBGRADE SHOULD BE NO LESS THAN 6 INCHES BELOW THE BASE OF THE CONCRETE FOOTINGS. FOLLOWING INSPECTION OF THE PREPARED SUBGRADE BY THE ENGINEER, ENGINEER MAY DIRECT CONTRACTOR TO LEVEL THE IRREGULAR SUBGRADE SURFACE BY PLACING  $\frac{1}{2}$ " -  $\frac{3}{4}$ " CRUSHED GRAVEL AGAINST THE PREPARED SUBGRADE TO PLACE SUBSEQUENT LIFTS OF SELECT FILL TYPE A.

- ① TOP LINER SHALL BE FASTENED SECURE TO CONCRETE SPRING BOX PER DETAIL C, SHEET C109, THEN AGAINST EXISTING EXCAVATED SPRING WALLS AS SHOWN ON SHEET C105 AND DETAIL E, SHEET C109
- ② BOTTOM LINER SHALL BE FASTENED SECURE TO CONCRETE SPRING BOX PER DETAIL D, SHEET C109, THEN TO EXISTING BACK WALL (SPRINGS FACE) AT JUNCTION OF CATCHMENT TO CATCHMENT FLOOR AS SHOWN ON SHEET C105 AND DETAIL F, SHEET C109
- ③ SIDEWALL LINER SHALL BE PLACED BY TURNING BOTTOM LINER UP AT JUNCTION OF CATCHMENT AREA FLOOR AND EXISTING EXCAVATED SPRING WALLS SO THAT LINER FOLDS ONE CONTINUOUS SHEET TO WHERE IT IS HOT-WELDED TO TOP LINER AS SHOWN ON DETAIL G, SHEET C109.
- ④ TRIM EXISTING WEST SIDEWALL TO LINES AND GRADES AS SHOWN TO FACILITATE PLACEMENT OF STACKED STONE.
- ⑤ ATTACH TOP AND BOTTOM LINERS TO CONCRETE ALONG ENTIRE EXTENT SHOWN; ATTACH SIDEWALL LINER TO EDGE OF CONCRETE EXISTING WALLS AS SHOWN ON SHEET C109. DETAIL FOR LINER TO CONCRETE ATTACHMENT DETAIL, SEE ALSO NOTE 2 OF DETAIL H, SHEET C109 REGARDING ALTERNATIVE ATTACHMENT METHOD(S). IN ACCORDANCE WITH SPECIFICATIONS, CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL OF THE LAYOUT, MATERIALS AND METHODS FOR THE LINER, GEOTEXTILE FABRIC, AND ATTACHMENT OF LINER TO CONCRETE.



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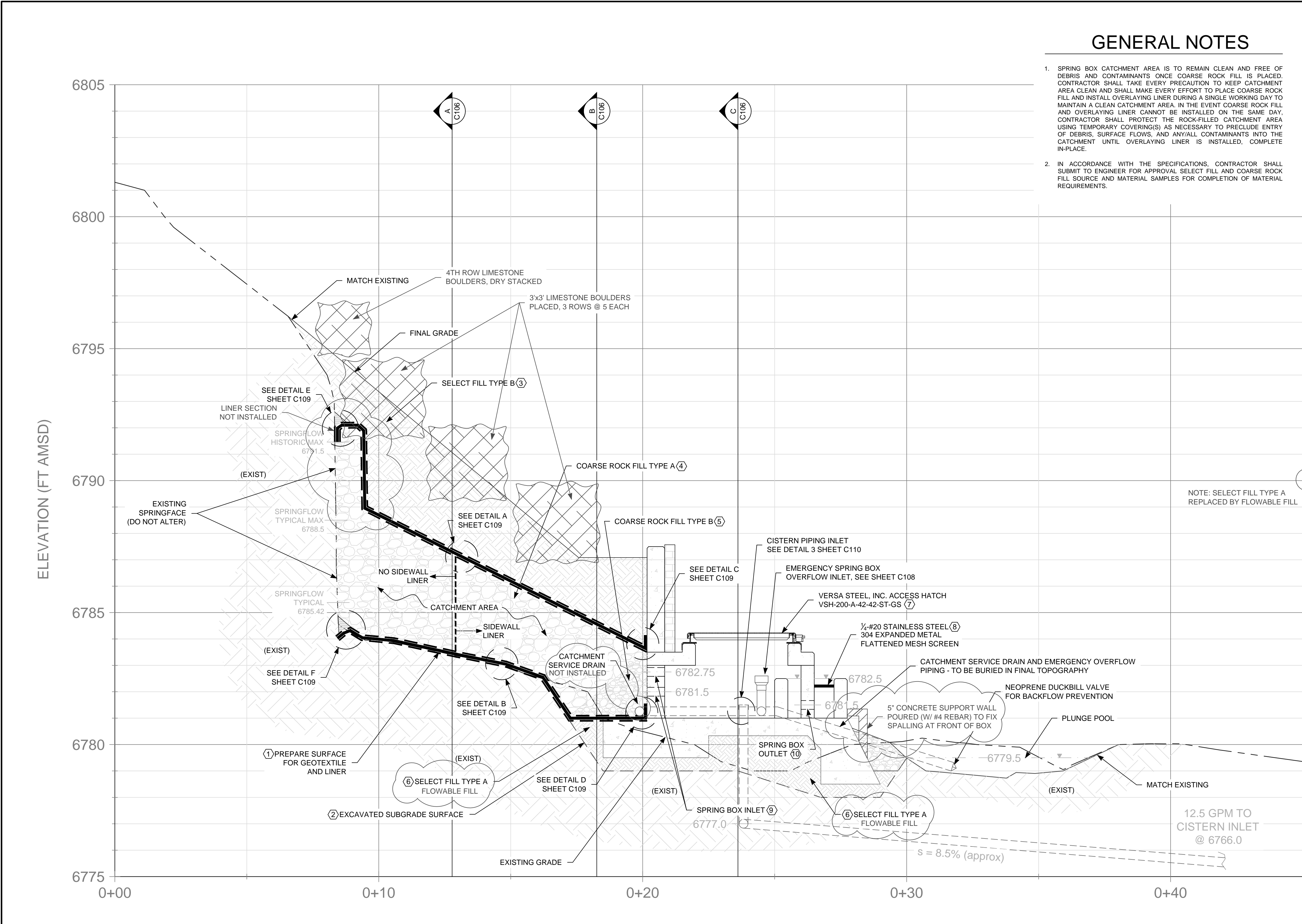
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PROJECT NO: BERNC.C001.CRLTO Task 2	SHEET: C104

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CARLITO SPRINGS OPEN SPACE  
SPRING BOX

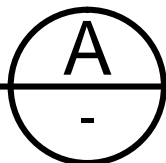
# AS-BUILT SPRING BOX SUBGRADE, PLUNGE POOL AND LINER PLAN





SPRING BOX PROFILE

HORIZONTAL: 1" = 2'  
VERTICAL: 1" = 2'



GENERAL NOTES

1. SPRING BOX CATCHMENT AREA IS TO REMAIN CLEAN AND FREE OF DEBRIS AND CONTAMINANTS ONCE COARSE ROCK FILL IS PLACED. CONTRACTOR SHALL TAKE EVERY PRECAUTION TO KEEP CATCHMENT AREA CLEAN AND SHALL MAKE EVERY EFFORT TO PLACE COARSE ROCK FILL AND INSTALL OVERLAYING LINER DURING A SINGLE WORKING DAY TO MAINTAIN A CLEAN CATCHMENT AREA. IN THE EVENT COARSE ROCK FILL AND OVERLAYING LINER CANNOT BE INSTALLED ON THE SAME DAY, CONTRACTOR SHALL PROTECT THE ROCK-FILLED CATCHMENT AREA USING TEMPORARY COVERING(S) AS NECESSARY TO PRECLUDE ENTRY OF DEBRIS, SURFACE FLOWS, AND ANY/ALL CONTAMINANTS INTO THE CATCHMENT UNTIL OVERLAYING LINER IS INSTALLED, COMPLETE IN-PLACE.
2. IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL SELECT FILL AND COARSE ROCK FILL SOURCE AND MATERIAL SAMPLES FOR COMPLETION OF MATERIAL REQUIREMENTS.

KEYED NOTES

1. SUBGRADE FOR GEOTEXTILE AND FML IN CATCHMENT AREA IS TO BE LIGHTLY LEVELED AND SMOOTHED BY HAND AT THE DIRECTION OF THE ENGINEER. ENGINEER SHALL INSPECT AND APPROVE THE SUBGRADE SURFACE PRIOR TO PLACEMENT OF THE GEOTEXTILE AND FML.
2. THE AREA TO BE EXCAVATED TO SUBGRADE FOR THE SPRING BOX AND ASSOCIATED RETAINING WALLS AND FOOTINGS IS VERY IRREGULAR AND CONSISTS OF VARIABLE MATERIAL TYPES AND SIZES. THE LINES AND GRADES OF THE SUBGRADED AREA AS SHOWN ARE APPROXIMATE, BUT SUBGRADE SHOULD BE NO LESS THAN 6 INCHES BELOW THE BASE OF THE CONCRETE FOOTINGS. LIMITED SUBSURFACE INVESTIGATION OF THE SITE DOES NOT INDICATE THE PRESENCE OF BEDROCK IN THE AREAS OF EXCAVATED SUBGRADE, BUT IN THE EVENT BEDROCK IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED TO EXAMINE THE SUBGRADE SURFACE. IN THE EVENT LARGE ROOTS (LARGER THAN 2 INCHES IN DIAMETER) ARE ENCOUNTERED, PRIOR TO REACHING REQUIRED SUBGRADE ELEVATIONS, OWNER AND ENGINEER SHALL BE NOTIFIED TO EXAMINE THE ROOT(S) PRIOR TO TRIMMING ROOT(S). ENGINEER SHALL INSPECT AND APPROVE THE SUBGRADE SURFACE PRIOR TO PLACEMENT OF SELECT FILL TYPE A MATERIAL.
3. SELECT FILL TYPE B IS TO BE PLACED WITHIN THE PLANTER AREAS BEHIND THE CONCRETE RETAINING WALLS AND ABOVE THE GEOTEXTILE AND FML WITHIN THE CATCHMENT AREA AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF SELECT FILL TYPE B MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML. SELECT FILL TYPE B SHALL BE PLACED AND COMPACTED TO BETWEEN 85% AND 90% STANDARD PROCTOR DENSITY (ASTM D698) TO THE LINES AND GRADES SHOWN IN THE DRAWINGS.
4. COARSE ROCK FILL TYPE A IS TO BE PLACED WITHIN THE CATCHMENT AREA AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF COARSE ROCK FILL TYPE A MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML.
5. COARSE ROCK FILL TYPE B IS TO BE PLACED WITHIN THE CATCHMENT AREA AS SHOWN, IN THE TRANSITION AREA FROM COARSE ROCK FILL TYPE A TO THE SPRING BOX INLET. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF COARSE ROCK FILL TYPE B MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML.
6. SELECT FILL TYPE A SHALL BE PLACED AND COMPACTED TO MINIMUM 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557) ABOVE EXCAVATED SUBGRADE AND BENEATH ALL CONCRETE FOOTINGS AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. SEE ALSO KEYED NOTE 2 THIS SHEET.
7. SEE MANUFACTURER'S INFORMATION IN ATTACHMENT B OF SPECIFICATIONS. HATCH SHALL BE BUILT-TO-ORDER WITH A TOP SLOPE OF 1% TOWARD THE FRONT OF THE SPRING BOX. CONTRACTOR TO PRIME AND PAINT TO COLOR SELECTED BY OWNER. IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL, DETAILING REQUIRED ACCESS HATCH DIMENSIONS AND OTHER REQUIREMENTS FOR BUILT-TO-ORDER FROM MANUFACTURER.
8. ATTACHMENT C OF THE SPECIFICATIONS INCLUDES INFORMATION FOR THE EXPANDED METAL SCREEN MATERIAL APPROVED FOR USE ON THIS PROJECT. UPON ENGINEER'S REVIEW AND APPROVAL, CONTRACTOR MAY USE EQUIVALENT OR BETTER MATERIAL. IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACTOR SHALL SUBMIT A SHOP DRAWING DETAILING MATERIAL, DIMENSIONS, AND PLACEMENT OF SCREEN IN SPRING BOX AS REQUIRED.
9. SPRING BOX INLET, 5 X 4-INCH PVC SLEEVES - SEE DETAIL C1, SHEET S101 FOR PLACEMENT. PROVIDE 1/2-INCH MESH SCREEN ON INLET SIDE TO PREVENT COARSE ROCK FILL FROM ENTERING SPRING BOX.
10. SPRING BOX OUTLET, 2 X 4-INCH PVC SLEEVES - SEE DETAIL C2, SHEET S101 FOR PLACEMENT.

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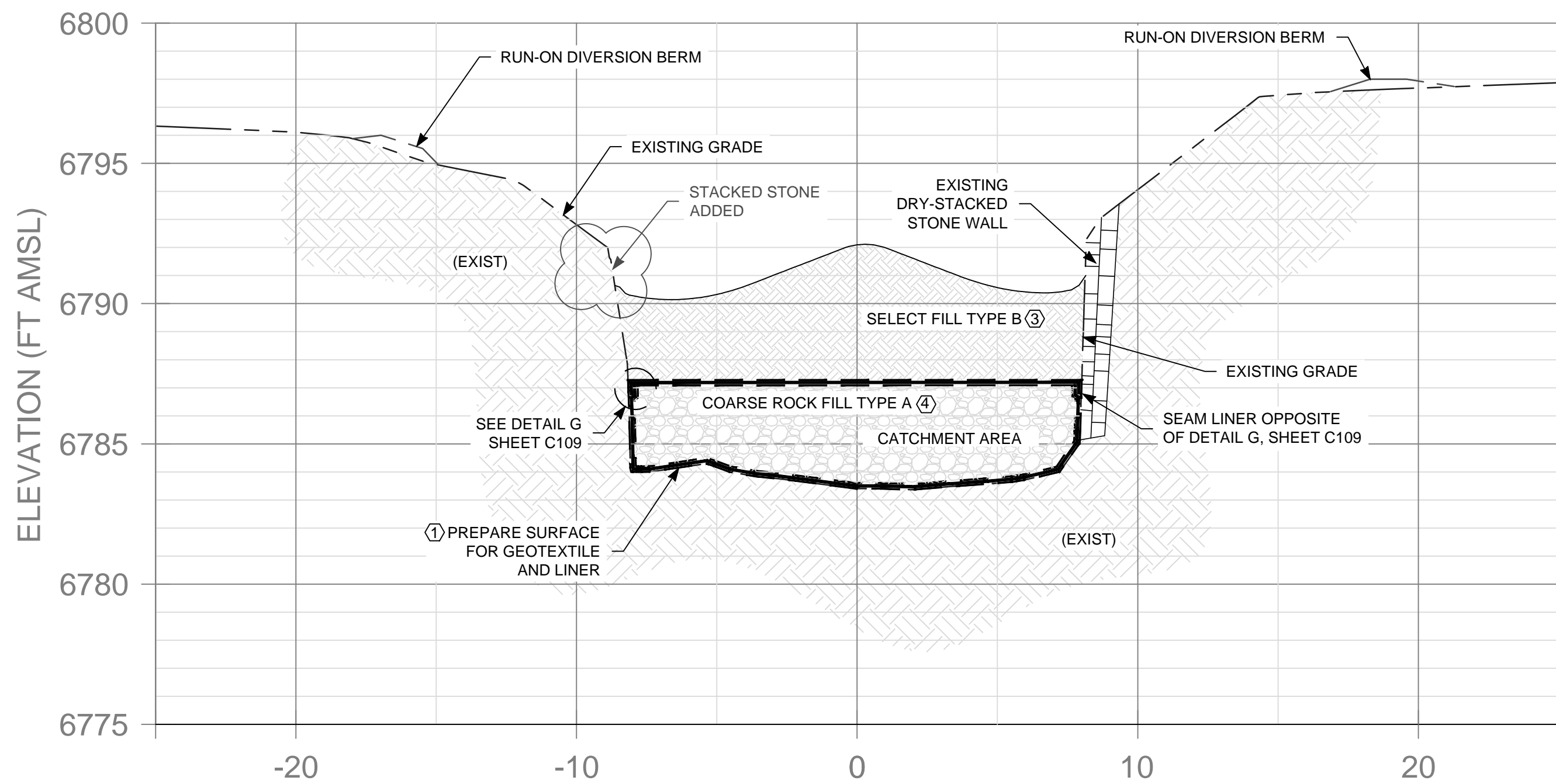
MORROW REARDON  
WILKINSON MILLER, LTD.,  
LANDSCAPE ARCHITECTS  
210 La Veta NE, Albuquerque, NM 87108  
505.268.2266 FAX 505.265.9637  
mrw@mrwnm.com



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6000 Uptown Boulevard, Suite 220  
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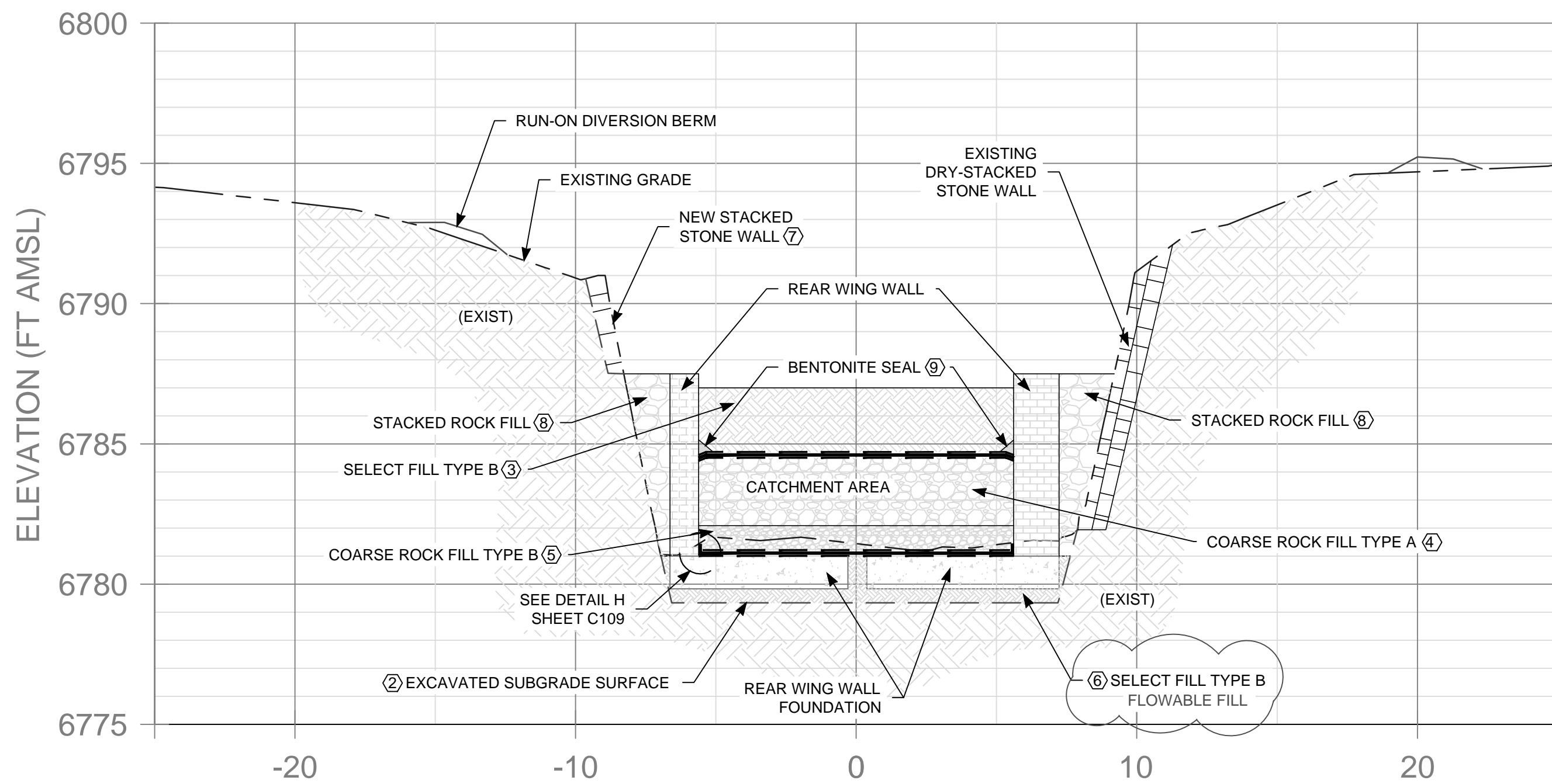
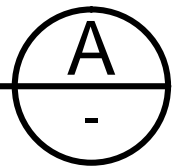
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PROJECT NO:  
BERNC.C001.CRLTO Task 2  
SHEET:  
C105





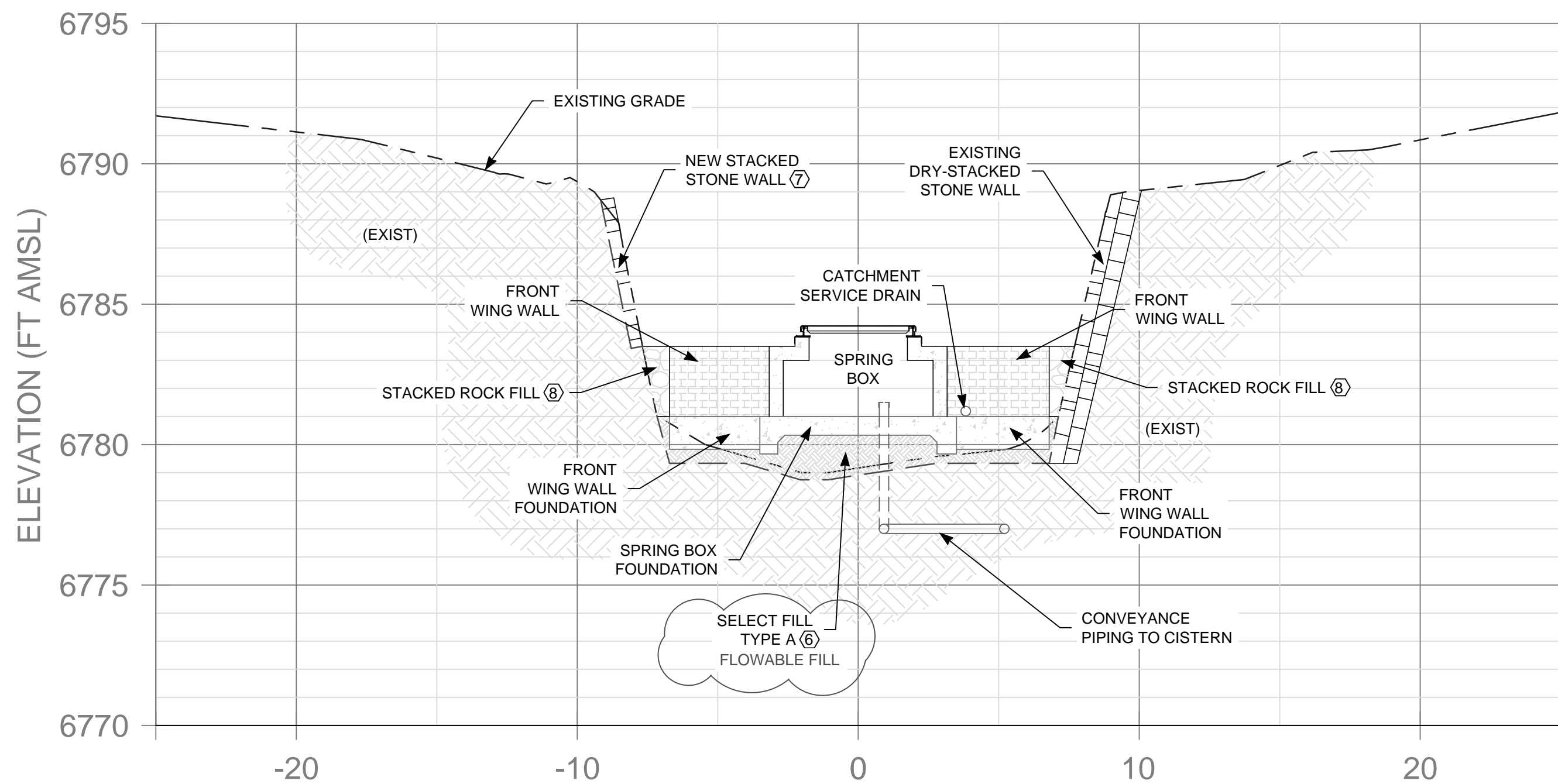
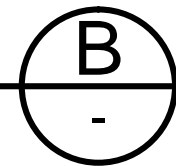
SPRING BOX SECTION

HORIZONTAL: 1" = 4'  
VERTICAL: 1" = 4'



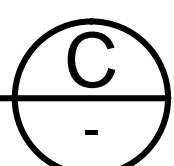
SPRING BOX SECTION

HORIZONTAL: 1" = 4'  
VERTICAL: 1" = 4'



SPRING BOX SECTION

HORIZONTAL: 1" = 4'  
VERTICAL: 1" = 4'



## KEYED NOTES

- SUBGRADE FOR GEOTEXTILE AND FML IN CATCHMENT AREA IS TO BE LIGHTLY LEVELED AND SMOOTHED BY HAND AT THE DIRECTION OF THE ENGINEER. ENGINEER SHALL INSPECT AND APPROVE THE SUBGRADE SURFACE PRIOR TO PLACEMENT OF THE GEOTEXTILE AND FML.
- THE AREA TO BE EXCAVATED TO SUBGRADE FOR THE SPRING BOX AND ASSOCIATED RETAINING WALLS AND FOOTINGS IS VERY IRREGULAR AND CONSISTS OF VARIABLE MATERIAL TYPES AND SIZES. THE LINES AND GRADES OF THE SUBGRADED AREA AS SHOWN ARE APPROXIMATE, BUT SUBGRADE SHOULD BE NO LESS THAN 6 INCHES BELOW THE BASE OF THE CONCRETE FOOTINGS. LIMITED SUBSURFACE INVESTIGATION OF THE SITE DOES NOT INDICATE THE PRESENCE OF BEDROCK IN THE AREAS OF EXCAVATED SUBGRADE; BUT IN THE EVENT BEDROCK IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED TO EXAMINE THE SUBGRADE SURFACE. IN THE EVENT LARGE ROOTS LARGER THAN 2 INCHES IN DIAMETER ARE ENCOUNTERED PRIOR TO REACHING REQUIRED SUBGRADE ELEVATIONS, OWNER AND ENGINEER SHALL BE NOTIFIED TO EXAMINE THE ROOT(S) PRIOR TO TRIMMING ROOT(S). ENGINEER SHALL INSPECT AND APPROVE THE SUBGRADE SURFACE PRIOR TO PLACEMENT OF SELECT FILL TYPE A MATERIAL. FOLLOWING INSPECTION OF THE PREPARED SUBGRADE BY THE ENGINEER, ENGINEER MAY DIRECT CONTRACTOR TO LEVEL THE IRREGULAR SUBGRADE SURFACE BY PLACING 1/2" - 3/4" CRUSHED GRAVEL AGAINST THE PREPARED SUBGRADE TO PLACE SUBSEQUENT LIFTS OF SELECT FILL TYPE A.
- SELECT FILL TYPE B IS TO BE PLACED WITHIN THE PLANTER AREAS BEHIND THE CONCRETE RETAINING WALLS AND ABOVE THE GEOTEXTILE AND FML WITHIN THE CATCHMENT AREA AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF SELECT FILL TYPE B MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML. SELECT FILL TYPE B SHALL BE PLACED AND COMPACTED TO BETWEEN 85% AND 90% STANDARD PROCTOR DENSITY (ASTM D698) TO THE LINES AND GRADES SHOWN IN THE DRAWINGS.
- COARSE ROCK FILL TYPE A IS TO BE PLACED WITHIN THE CATCHMENT AREA AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF COARSE ROCK FILL TYPE A MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML.
- COARSE ROCK FILL TYPE B IS TO BE PLACED WITHIN THE CATCHMENT AREA AS SHOWN. IN THE TRANSITION AREA FROM COARSE ROCK FILL TYPE A TO THE SPRING BOX INLET, SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. ENGINEER SHALL INSPECT AND APPROVE THE UNDERLYING GEOTEXTILE, AND FML AND RELATED SEALS AGAINST ADJOINING SURFACES AS SPECIFIED IN THESE DRAWINGS. PRIOR TO PLACEMENT OF COARSE ROCK FILL TYPE B MATERIAL, CONTRACTOR SHALL TAKE EXTREME CARE TO PLACE FILL MATERIAL ON TOP OF/AGAINST THE GEOTEXTILE AND FML SO AS NOT TO DAMAGE THE GEOTEXTILE AND FML.
- SELECT FILL TYPE A SHALL BE PLACED AND COMPACTED TO MINIMUM 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557) ABOVE EXCAVATED SUBGRADE AND BENEATH ALL CONCRETE FOOTINGS AS SHOWN. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR REQUIREMENTS OF MATERIAL CHARACTERISTICS AND PLACEMENT. SEE ALSO KEYED NOTE 2 THIS SHEET.
- NEW STACKED STONE WALL LOCATED ON WEST SIDE WALL TO VISUALLY MATCH EXISTING STACKED STONE WALL ON EAST SIDE WALL.
- STACKED ROCK FILL TO BE HAND PLACED TO FILL VOID BETWEEN WING WALLS AND SIDE WALLS; MUST BE APPROVED BY ENGINEER, BUT SHALL CONSIST OF EITHER SUITABLE APPROVED ON-SITE ROCK MATERIALS AND/OR IMPORTED ROCK MATERIALS APPROPRIATELY GRADED IN SIZE TO STACK AND LOCK TOGETHER BETWEEN CATCHMENT SIDEWALLS AND SPRING BOX WING WALLS AS SHOWN IN THE DRAWINGS.
- BENTONITE SEAL OF TOP AND BOTTOM LINER TO CATCHMENT SIDE WALLS WHERE THERE IS NO SIDE WALL LINER (SIMILAR TO DETAIL F, SHEET C109 - SEE ALSO GENERAL NOTE 4, SHEET C109).

NOTE: SELECT FILL TYPE A REPLACED BY FLOWABLE FILL

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FILE:  
S:\Projects\BERNC-C001-CRLTO-Carlito Springs\Task4-Construction\As-built\CarlitoSprings\_AsBuiltDrawings\_10-3-14.dwg  
PROJECT NO:  
BERNC.C001.CRLTO Task 2  
SHEET:  
C106

SURVEY INFORMATION / BENCH MARKS

ENGINEER SEAL

REVISIONS  
AS-BUILT RECORD

LMC

BY

DATE

REMARKS

DESIGNED BY: LMC/AEA

DRAWN BY: AEA

CHECKED BY: LMC

DATE: 10/8/2013

DATE: 10/9/2013

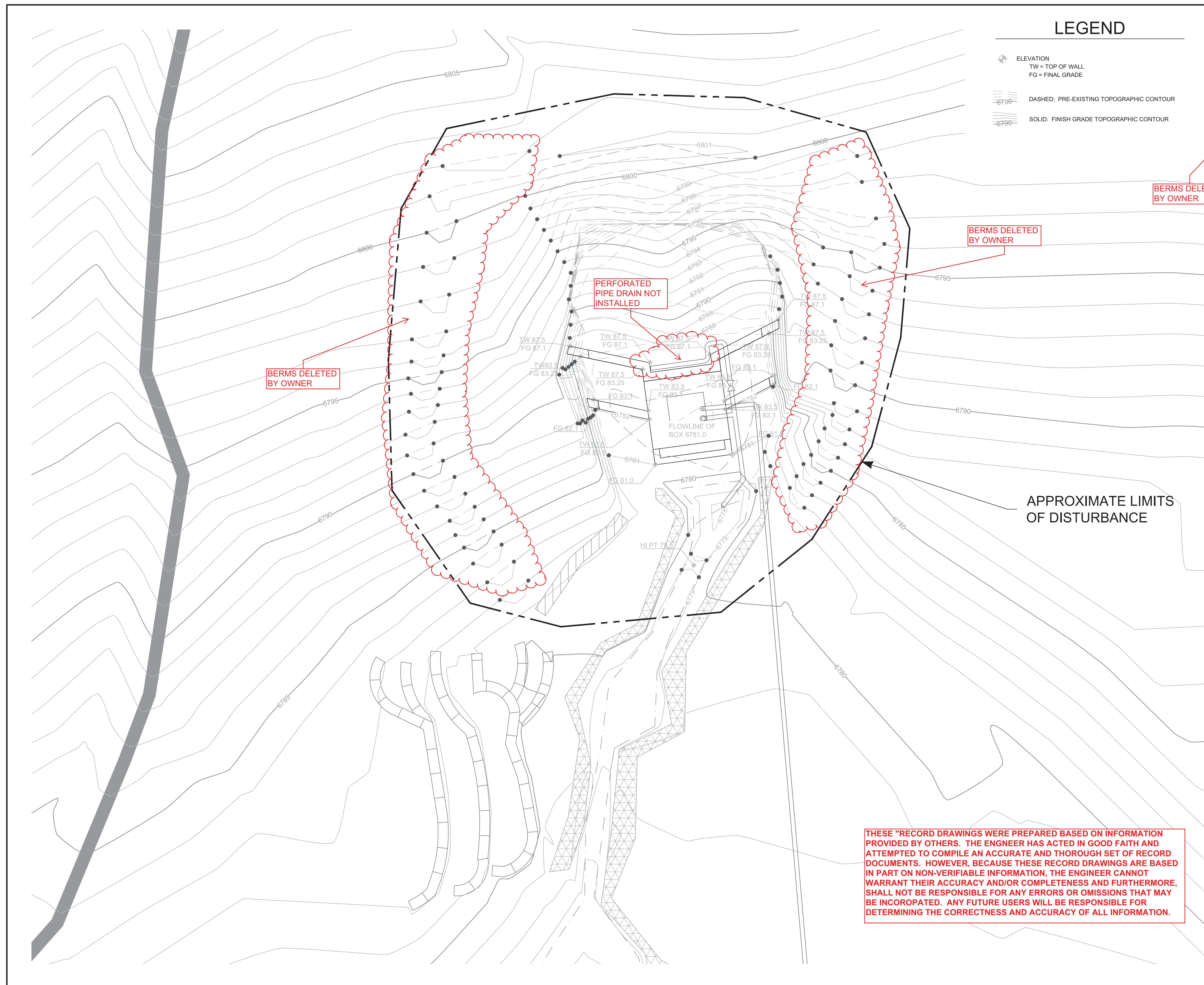
DATE: 10/9/2013

DESIGN

CARLITO SPRINGS OPEN SPACE  
SPRING BOX

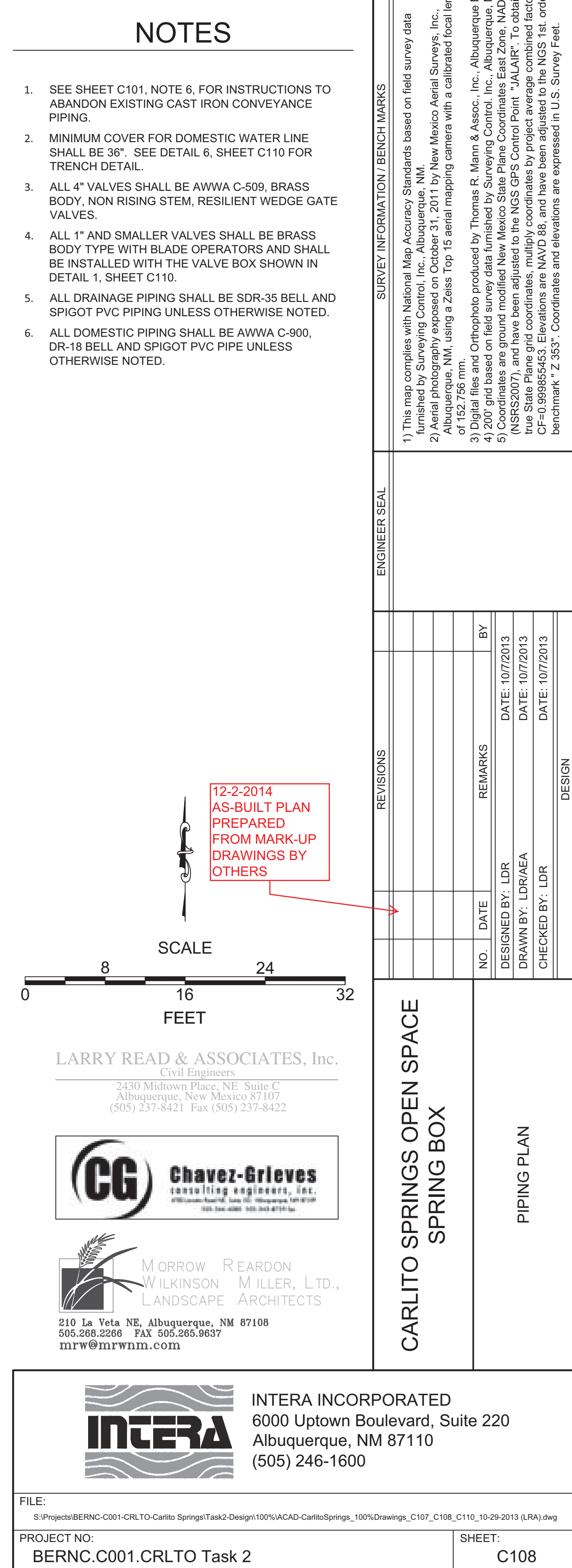
AS-BUILT  
SPRING BOX SECTION DETAILS



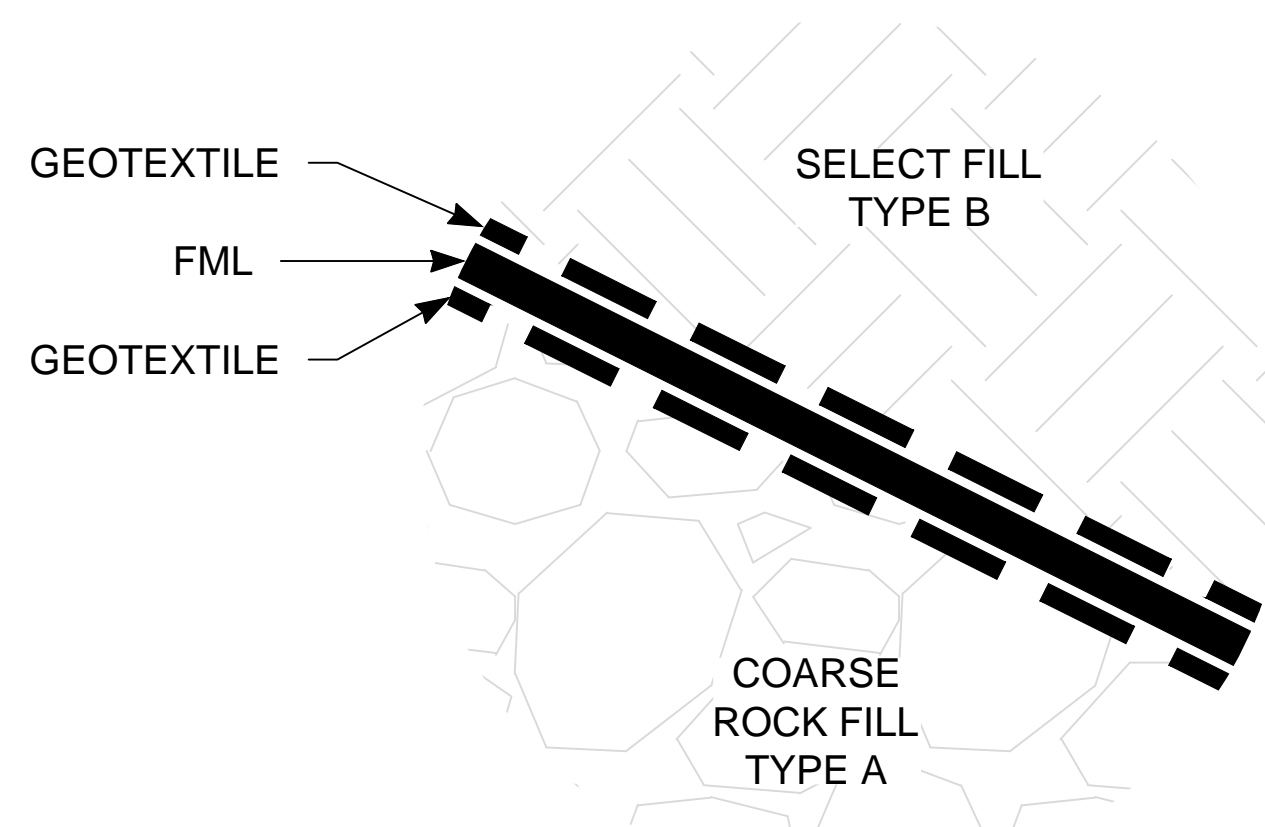


NOTES		SURVEY INFORMATION / BENCH MARKS		ENGINEER SEAL		REVISIONS		DESIGNED BY		DATE		DRAWN BY		DATE		CHECKED BY		DATE	
<p>1. RUN-ON BERM SHALL BE BUILT FROM AVAILABLE ONSITE MATERIAL WITH SUFFICIENT CLAY TO HOLD SHAPE DURING COMPACTION WITH HAND TAMPER, SEE DETAIL 5, SHEET C110.</p> <p>2. PRIOR TO FINAL GRADING AROUND SPRING BOX, INCLUDING CONSTRUCTION OF EARTHEN RUN-ON BERM, CONTRACTOR SHALL PREPARE SUBGRADE BY REMOVING LOOSE, ORGANIC SURFACE MATERIAL AND STOCKPILE ON-SITE FOR USE IN SITE RECLAMATION TO THE EXTENT PRACTICABLE, CONTRACTOR SHALL KEEP AND NOT DESTROY LARGER EXISTING VEGETATION (SHRUBS AND TREES) DURING SITE EXCAVATION. SEE SPECIFICATION 31 23 00 "EXCAVATION AND FILL" FOR ADDITIONAL SUBGRADE PREPARATION REQUIREMENTS.</p> <p>3. SEE SHEET C108 FOR NEW PIPING DETAILS.</p>		<p>1) This map complies with National Map Accuracy Standards based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.</p> <p>2) Aerial photography exposed on October 31, 2011 by New Mexico Aerial Surveys, Inc., Albuquerque, NM, using a Zeiss Top 15 aerial mapping camera with a calibrated focal length of 152.4 mm.</p> <p>3) Digital files and Orthophoto produced by Thomas R. Mann &amp; Assoc., Inc., Albuquerque, NM.</p> <p>4) 2007 grid based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.</p> <p>5) Coordinates are ground modified New Mexico State Plane Coordinates East Zone, NAD 83 (NRSR2007), and have been adjusted to the NGS GPS Control Point "JALAIR". To obtain true State Plane grid coordinates, multiply coordinates by project average combined factor CF=0.999955533. Elevations are NAVD 86, and have been adjusted to the NGS 1st order benchmark Z 535. Coordinates and elevations are expressed in U.S. Survey Feet.</p>		<p>12-2-2014 AS-BUILT PLAN PREPARED FROM MARK-UP DRAWINGS BY OTHERS</p>		<p>SCALE</p> <p>0 4 8 12 16 FEET</p>		<p>NO. DATE REMARKS</p> <p>DESIGNED BY: LDR DATE: 10/7/2013</p> <p>DRAWN BY: LDR/AEA DATE: 10/7/2013</p> <p>CHECKED BY: LDR DATE: 10/7/2013</p> <p>DESIGN</p>		<p>CARLITO SPRINGS OPEN SPACE SPRING BOX</p>		<p>GRADING AND SITE PLAN</p>							





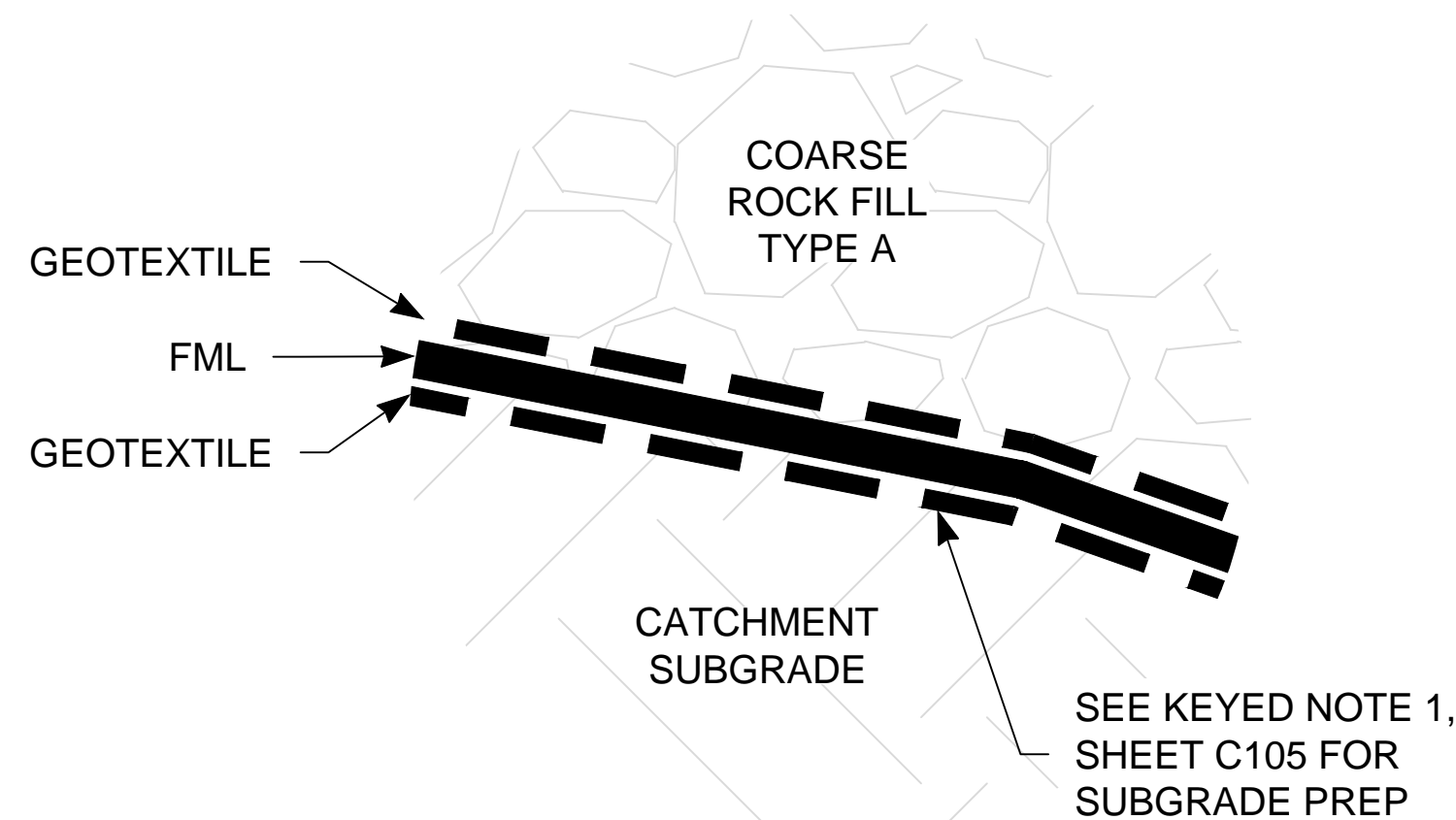




LINER DETAIL

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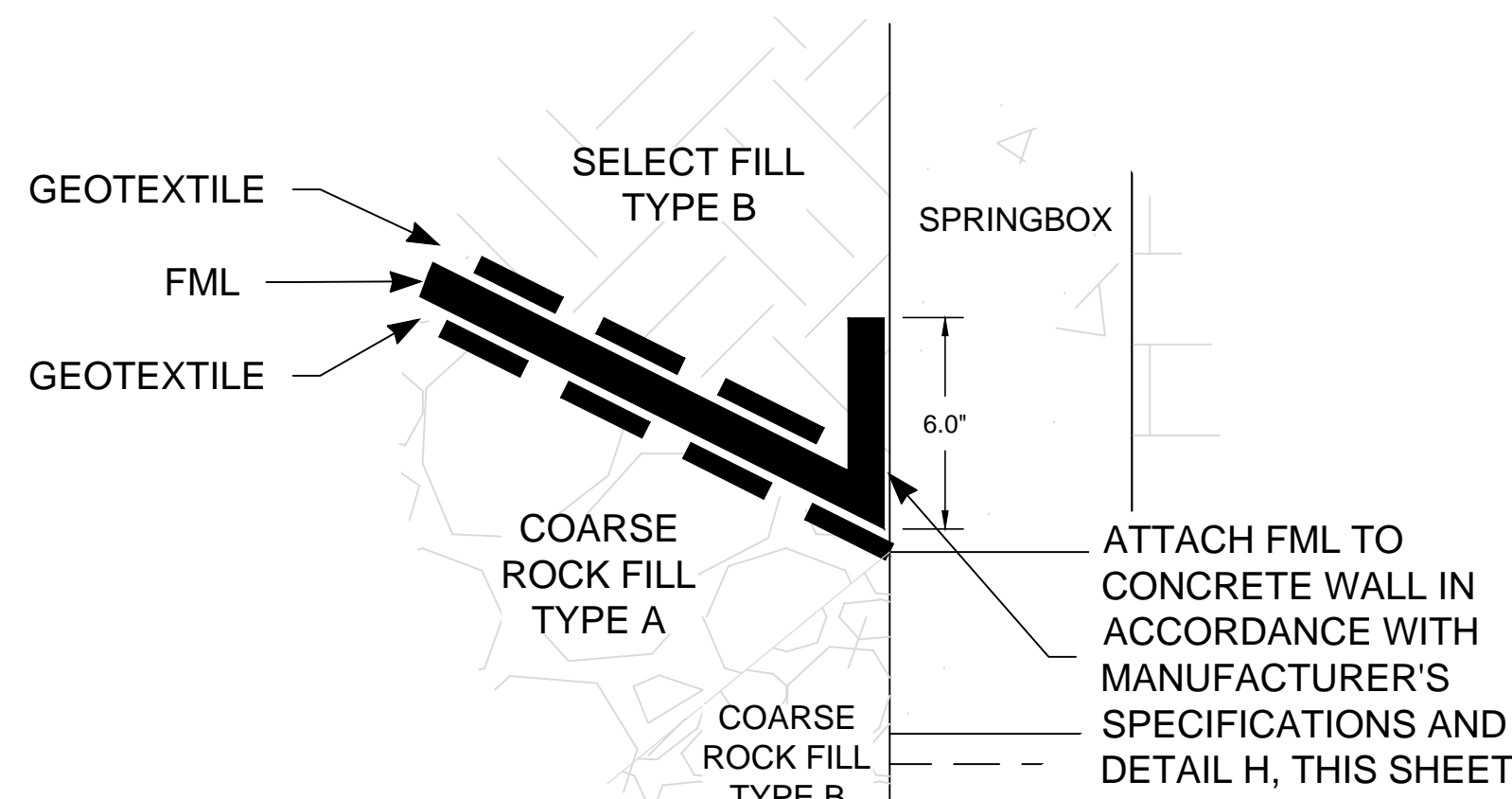
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LINER DETAIL

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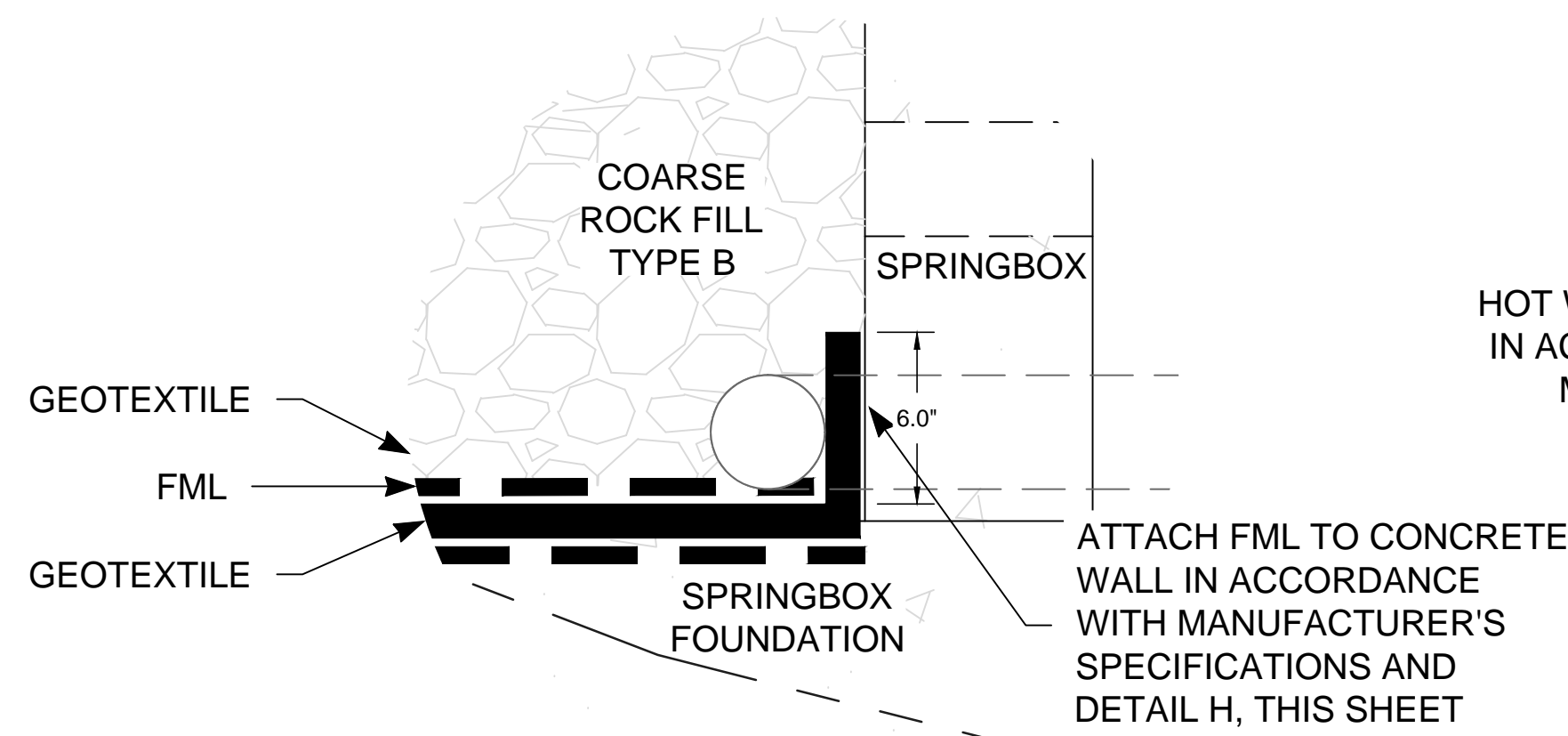
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TOP LINER TO  
SPRING BOX DETAIL

SCALE: 1" = 0.5'

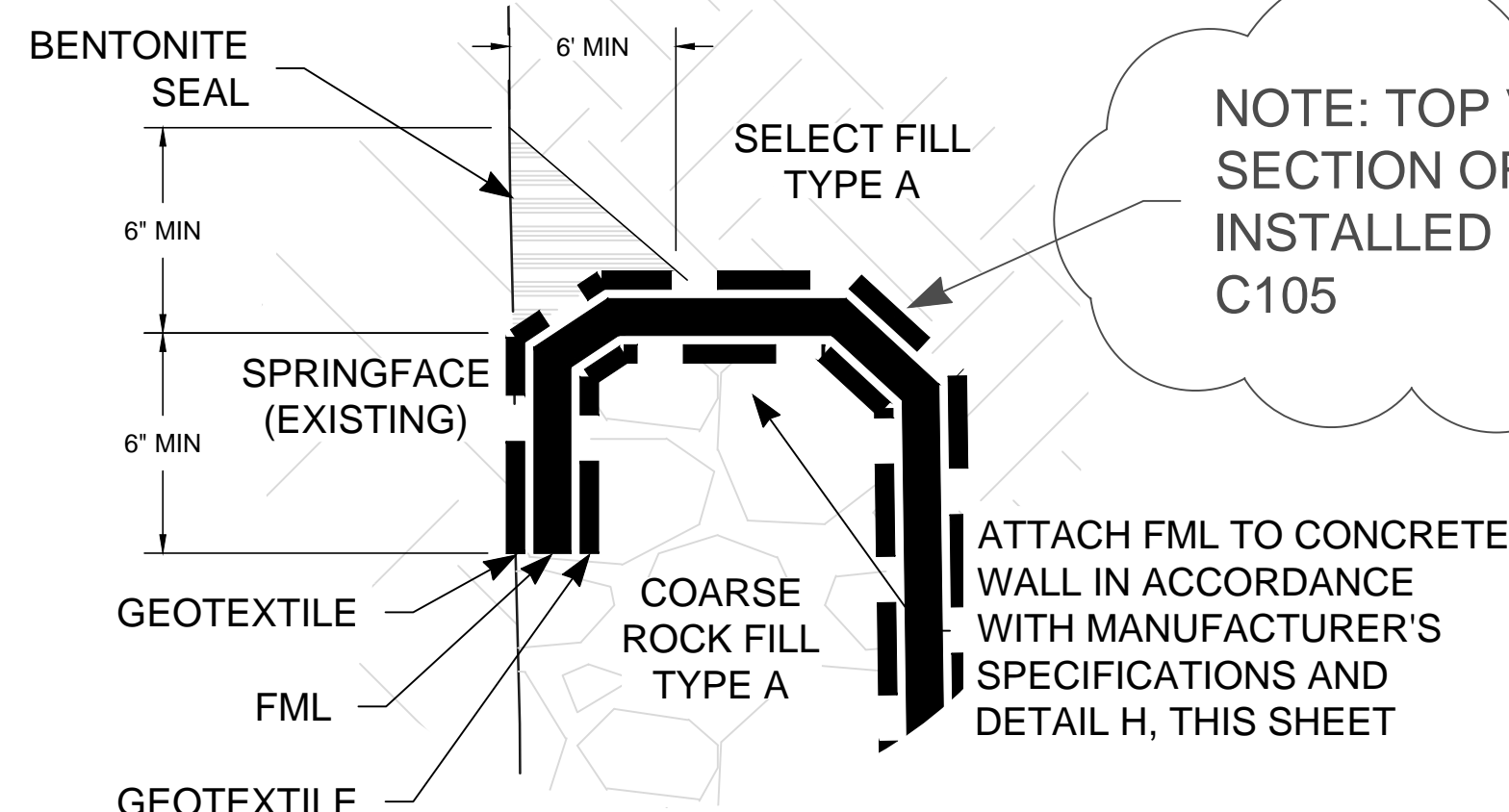
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BOTTOM LINER TO  
SPRING BOX DETAIL

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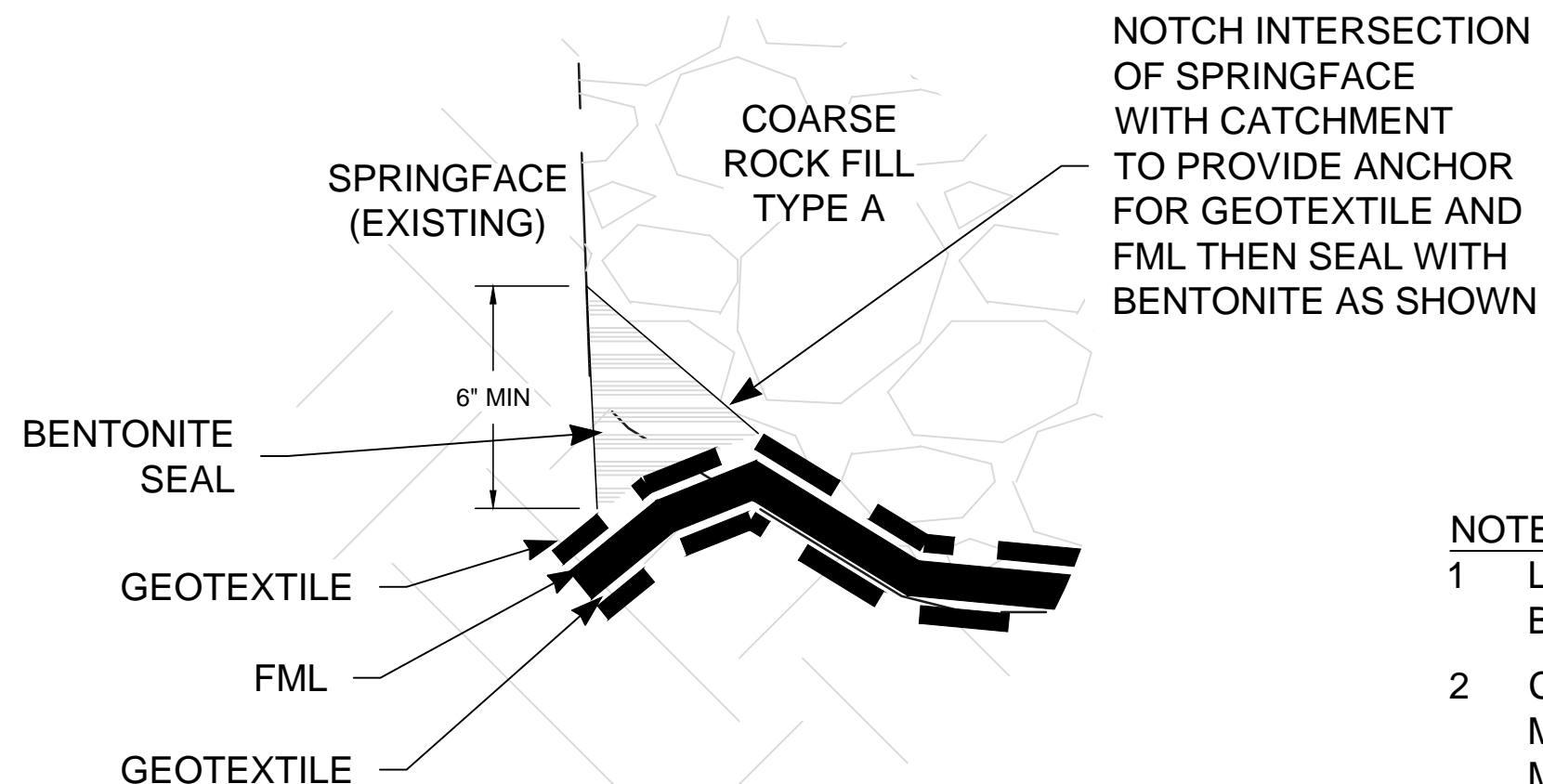
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TOP LINER TO EXISTING  
SPRING FACE DETAIL

SCALE: 1" = 0.5'

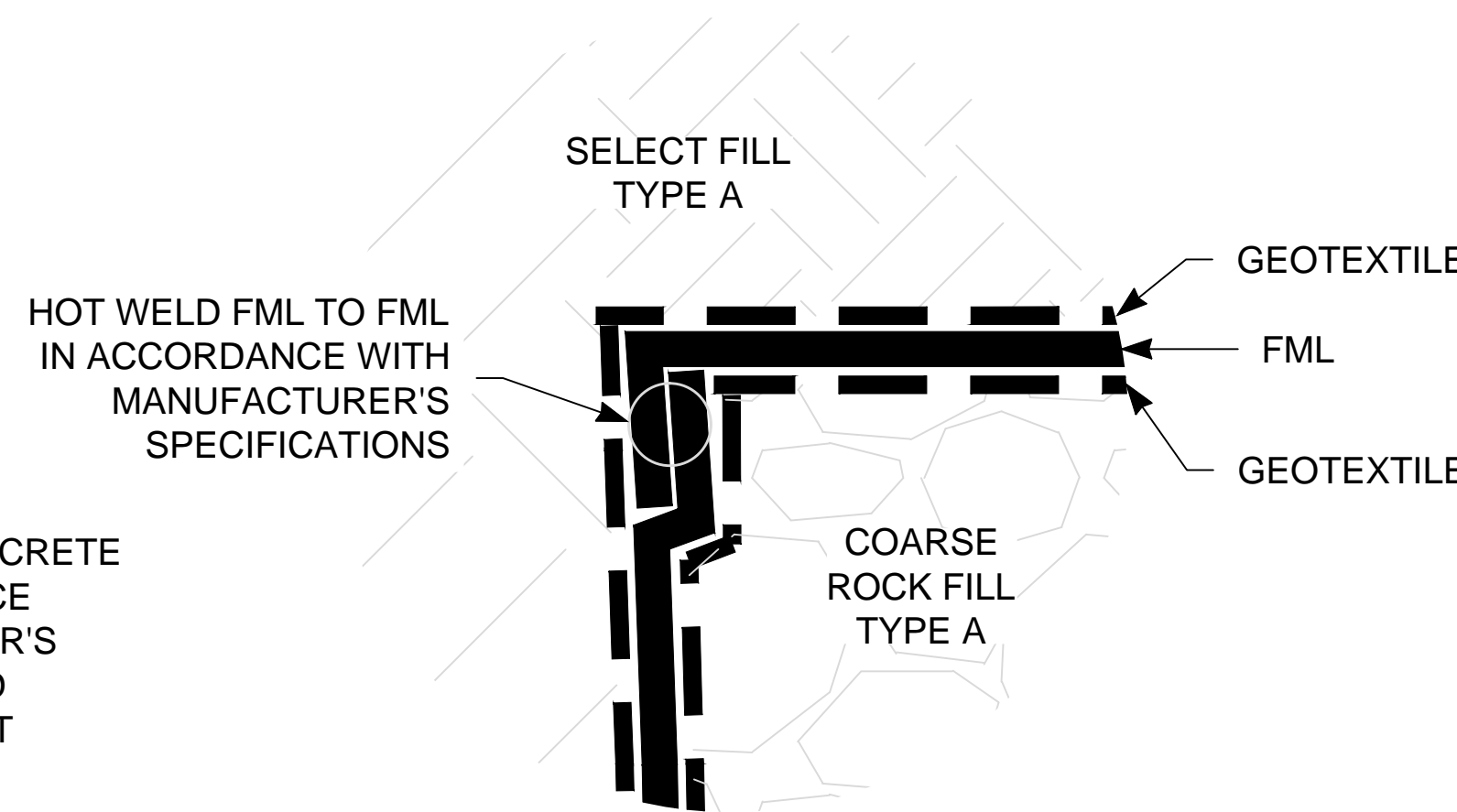
E  
-



BOTTOM LINER TO EXISTING  
SPRING FACE DETAIL

SCALE: 1" = 0.5'

F  
-



TOP LINER TO SIDEWALL  
LINER DETAIL

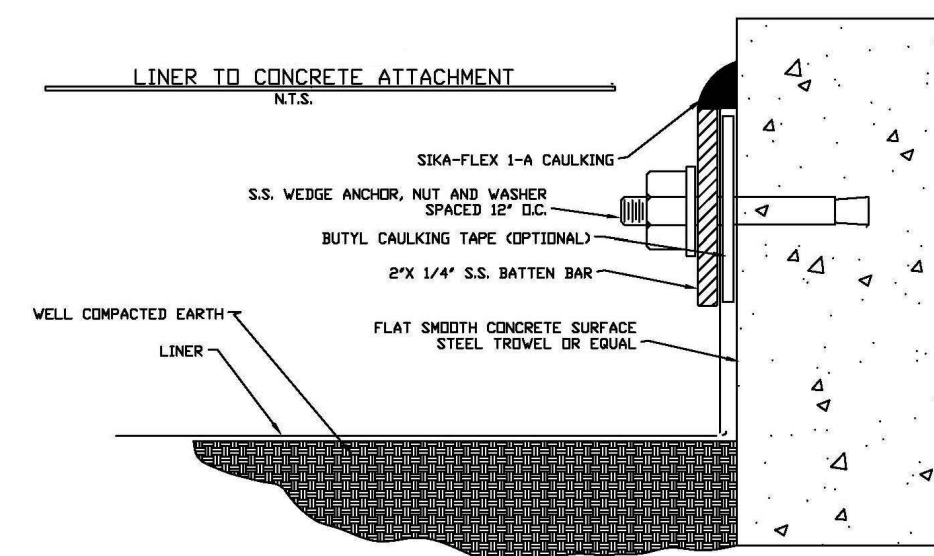
SCALE: 1" = 0.5'

G  
-

NOTE: 14 OZ FABRIC  
SUBSTITUTED FOR 10 OZ FABRIC

PHYSICAL PROPERTIES FOR 10-OUNCE PER SQUARE YARD NONWOVEN GEOTEXTILE FABRIC			
PROPERTY	UNIT	VALUE	STANDARD TEST METHOD
FABRIC WEIGHT	OZ/YD <sup>2</sup>	10	ASTM D5261
THICKNESS	MIL	110	ASTM D5199
EQUIVALENT OPENING SIZE	US STANDARD SIEVE	100	ASTM D4751
COEFFICIENT OF PERMEABILITY	CM/SEC	0.40	ASTM D4491
WATER FLOW RATE	GPM/SF	0.3	ASTM D4491
PERMITTIVITY	1/SEC	1.2	ASTM D4491
GRAB STRENGTH	LB	250	ASTM D4632
GRAB ELONGATION	PERCENT	50	ASTM D4632
PUNCTURE RESISTANCE	LB	160	ASTM D4833
MULLEN BURST STRENGTH	PSI	525	ASTM D3786

NOTE: PHYSICAL PROPERTIES REPRESENTATIVE OF SYNTHETICS INDUSTRIES 1001 NONWOVEN GEOTEXTILE.  
NONWOVEN GEOTEXTILE FABRIC SHALL BE MANUFACTURED BY MIRAFI, HOECHST CELANESE CORPORATION (SPUN BOUND), SYNTHETIC INDUSTRIES OR EQUAL TO BE APPROVED BY ENGINEER.



- NOTES:
- 1 LINER TO CONCRETE ATTACHMENT DETAIL FOR SIDES, TOP, AND BOTTOM OF LINER ATTACHMENT TO CONCRETE SPRING BOX.
  - 2 CONTRACTOR MAY RECOMMEND ALTERNATIVE ATTACHMENT METHODS TO ENGINEER FOR CONSIDERATION. ANY ALTERNATIVE METHODS SHALL NOT BE USED UNLESS APPROVED BY ENGINEER.

LINER TO CONCRETE  
ATTACHMENT DETAIL

SCALE: NTS

H  
-

## NOTES

1. SEE KEYED NOTES REGARDING FILL MATERIALS ON SHEETS C105 AND C106.
2. GEOTEXTILE: SHALL BE APPROVED BY THE ENGINEER AND SHALL HAVE THE PHYSICAL PROPERTIES SHOWN IN THE TABLE BELOW. OVERLAP GEOTEXTILE A MINIMUM OF 6 INCHES AT SEAMS.
3. FLEXIBLE MEMBRANE LINER (FML): SHALL BE APPROVED BY THE ENGINEER AND SHALL BE A 30-MIL POLYVINYL CHLORIDE (PVC). FML SHALL BE INSTALLED AS SHOWN, WITH SEAMS PLACED AS SHOWN.
4. BENTONITE SEAL: DRY BENTONITE PELLETS (1/2") OR FLAKES (NO POWDER) TO BE APPROVED BY ENGINEER. FOLLOWING DRY APPLICATION AND INSPECTION AND APPROVAL BY ENGINEER, HYDRATE BENTONITE SPARINGLY USING FRESH WATER. FILL MAY BE PLACED DIRECTLY ON TOP OF HYDRATED BENTONITE, BUT CONTRACTOR SHALL USE EXTREME CARE DURING FILL PLACEMENT TO NOT DISLODGE OR DAMAGE BENTONITE SEAL.
5. SPRING BOX CATCHMENT AREA IS TO REMAIN CLEAN AND FREE OF DEBRIS AND CONTAMINANTS ONCE COARSE ROCK FILL IS PLACED. CONTRACTOR SHALL TAKE EVERY PRECAUTION TO KEEP CATCHMENT AREA CLEAN AND SHALL MAKE EVERY EFFORT TO PLACE COARSE ROCK FILL AND INSTALL OVERLAYING LINER DURING A SINGLE WORKING DAY TO MAINTAIN A CLEAN CATCHMENT AREA. IN THE EVENT COARSE ROCK FILL AND OVERLAYING LINER CANNOT BE INSTALLED ON THE SAME DAY, CONTRACTOR SHALL PROTECT THE ROCK-FILLED CATCHMENT AREA USING TEMPORARY COVERING(S) AS NECESSARY TO PRECLUDE ENTRY OF DEBRIS, SURFACE FLOWS, AND ANY/ALL CONTAMINANTS INTO THE CATCHMENT UNTIL OVERLAYING LINER IS INSTALLED, COMPLETE IN-PLACE.

SURVEY INFORMATION / BENCH MARKS

ENGINEER SEAL

REVISIONS		AS-BUILT RECORD		REMARKS	
NO.	DATE	NO.	DATE	DESIGNED BY: LMC/AEA	DATE: 10/8/2013
10/3/14				DRAWN BY: AEA	DATE: 10/8/2013
				CHECKED BY: LMC	DATE: 10/9/2013
					DESIGN

CARLITO SPRINGS OPEN SPACE  
SPRING BOX

AS-BUILT  
LINER AND GEOTEXTILE DETAILS

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505-344-4080 505-343-8759 fax

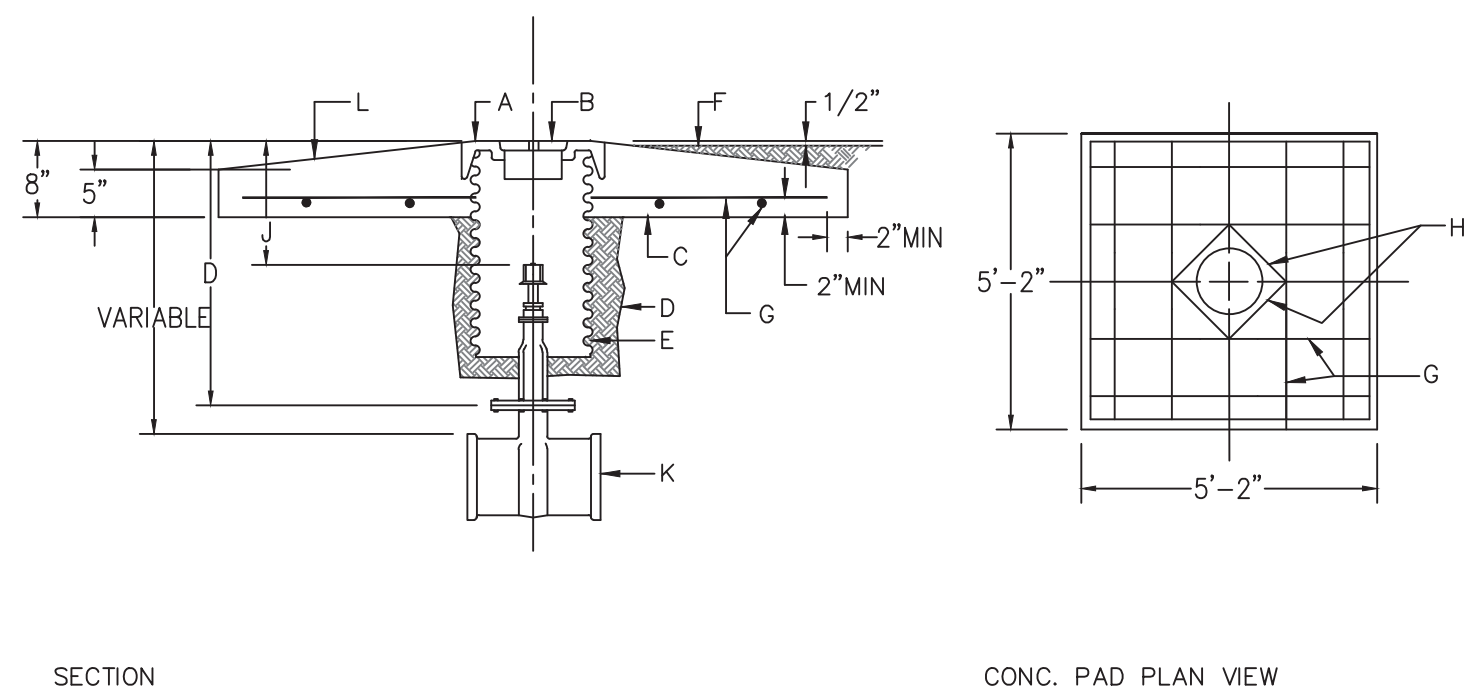
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PROJECT NO: BERNC.C001.CRLTO Task 2	



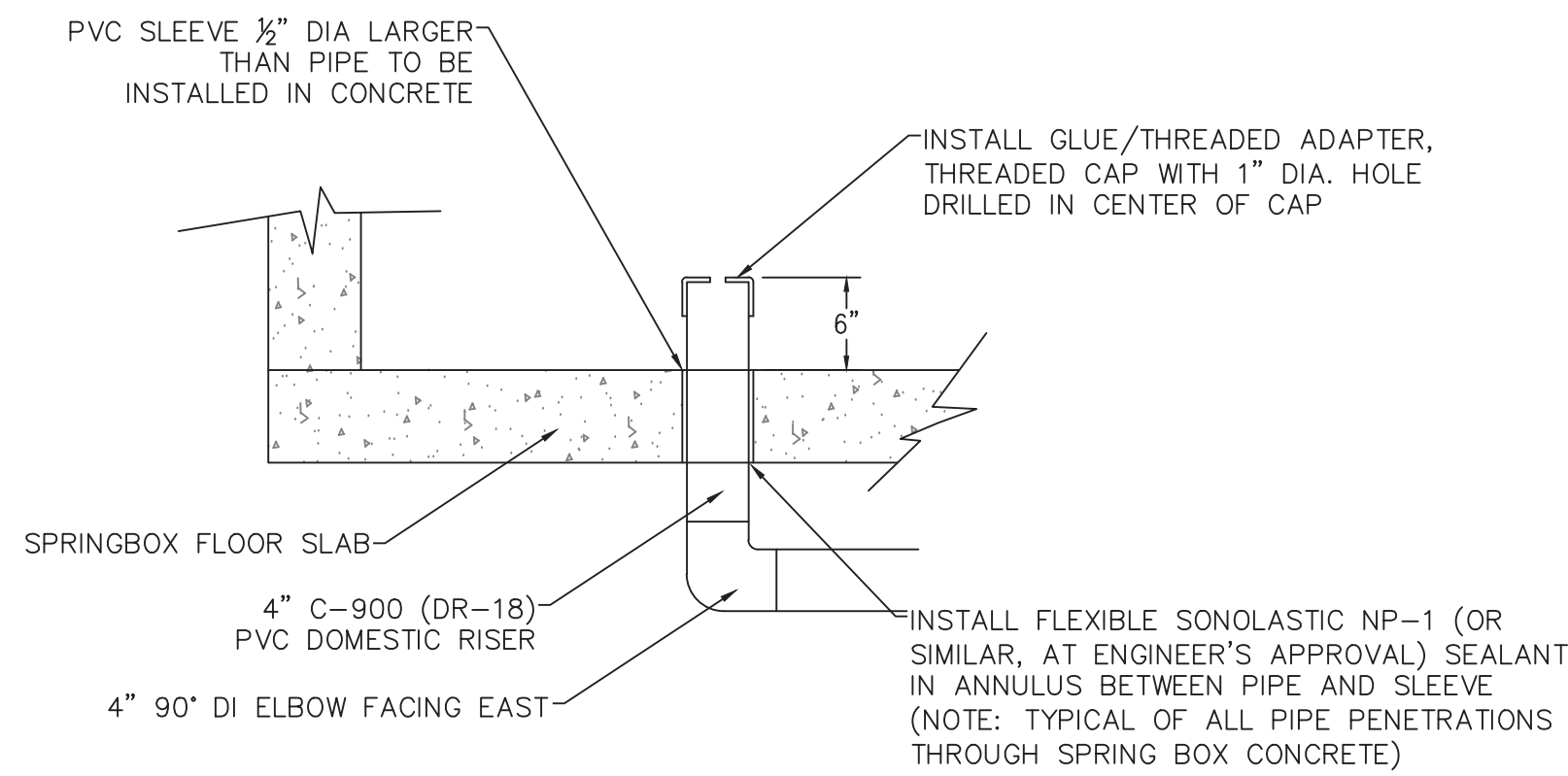


GENERAL NOTES:  
 1. SIDES OF CONC. PAD TO BE PARALLEL AND PERPENDICULAR TO THE ACCESS ROAD.

CONSTRUCTION NOTES:  
 A. RING.  
 B. COVER.  
 C. PORTLAND CEMENT CONC. 3000 PSI.  
 D. COMPACTED EARTH FILL, 90% TO 95% OF MAX. DENSITY AS DETERMINED BY A.S.T.M. D 1557.  
 E. 12" DIA. CORRUGATED GALV. CULVERT PIPE 14 GA. DIPPED IN COAL TAR ENAMEL OR COATED WITH POLYMERIC COATING 3 MILS THICK MIN. MEETING REQUIREMENTS SET BY A.A.S.H.T.O. M 246.  
 F. GROUND LEVEL.  
 G. NO. 4 BARS AT 12" O.C. EACH WAY.  
 H. NO. 4 BARS 1'-6" LONG.  
 J. 2'-0" MAX., USE STEM EXTENSION AS NECESSARY.  
 K. NEW AWWA C509 BRASS GATE VALVE.  
 L. SCRIBE IN THE FRESH CONCRETE THE SIZE OF THE VALVE.

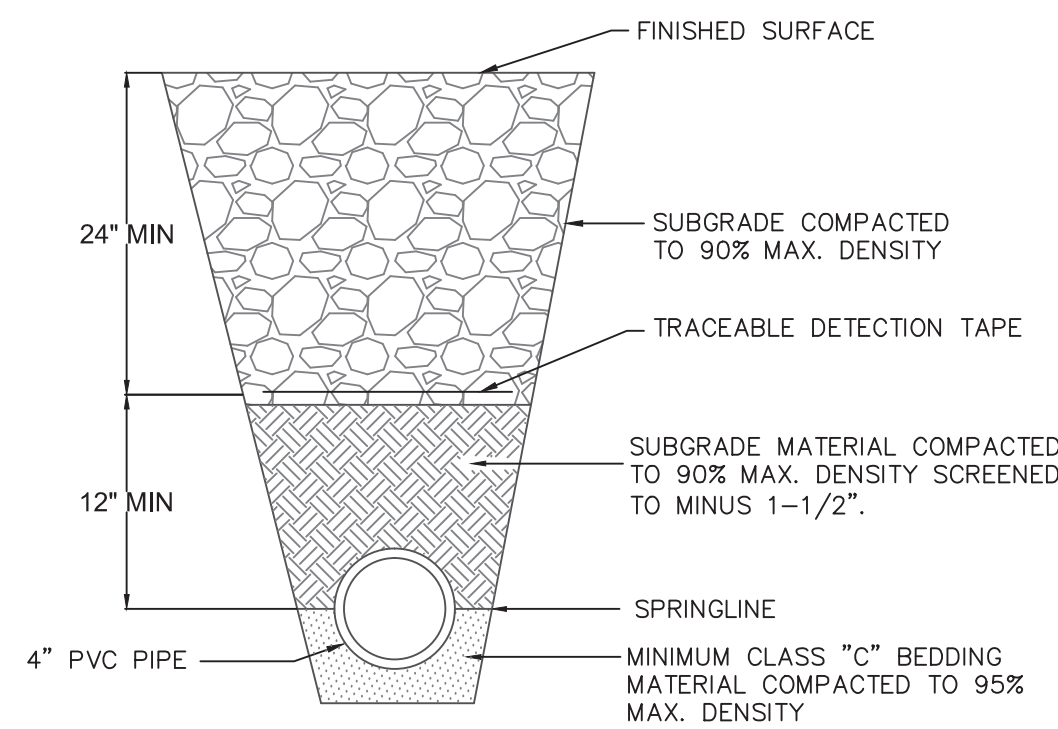
## VALVE BOX DETAIL

N.T.S.



## CISTERN CONVEYANCE PIPING INLET RISER

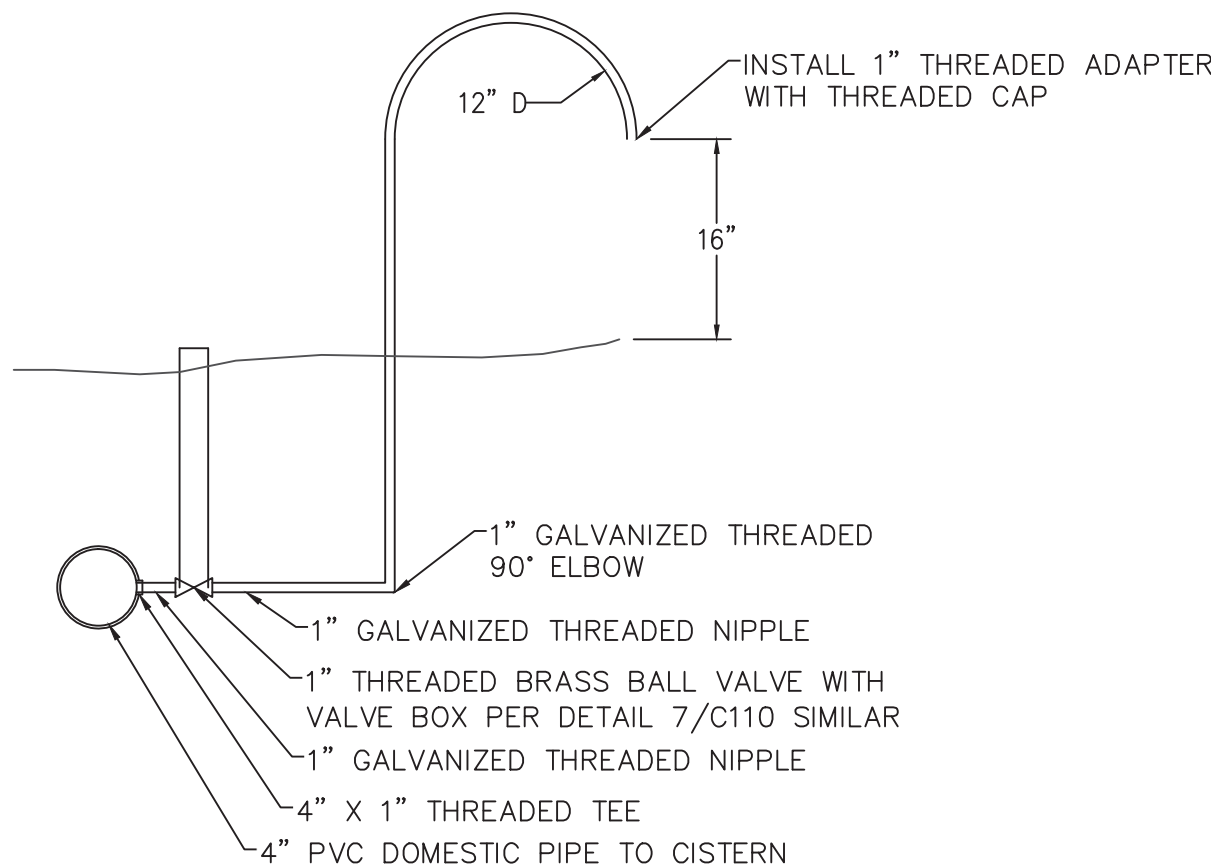
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CONSTRUCTION NOTE:  
 PROVIDE 36" MINIMUM COVER OVER PIPE.

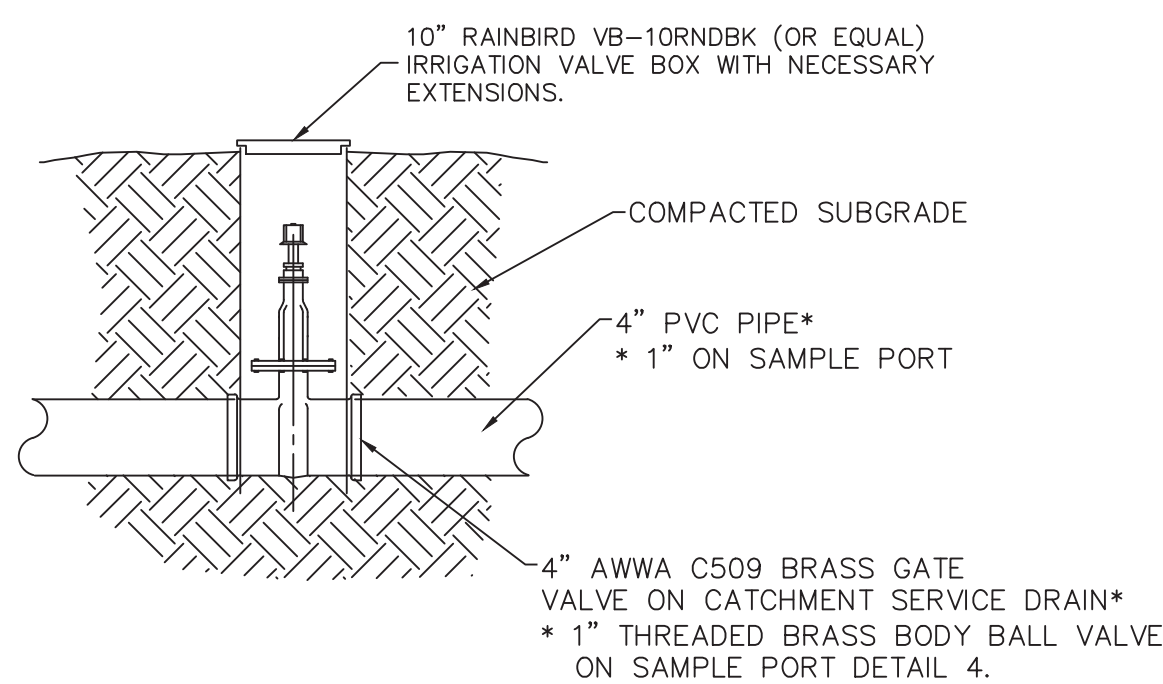
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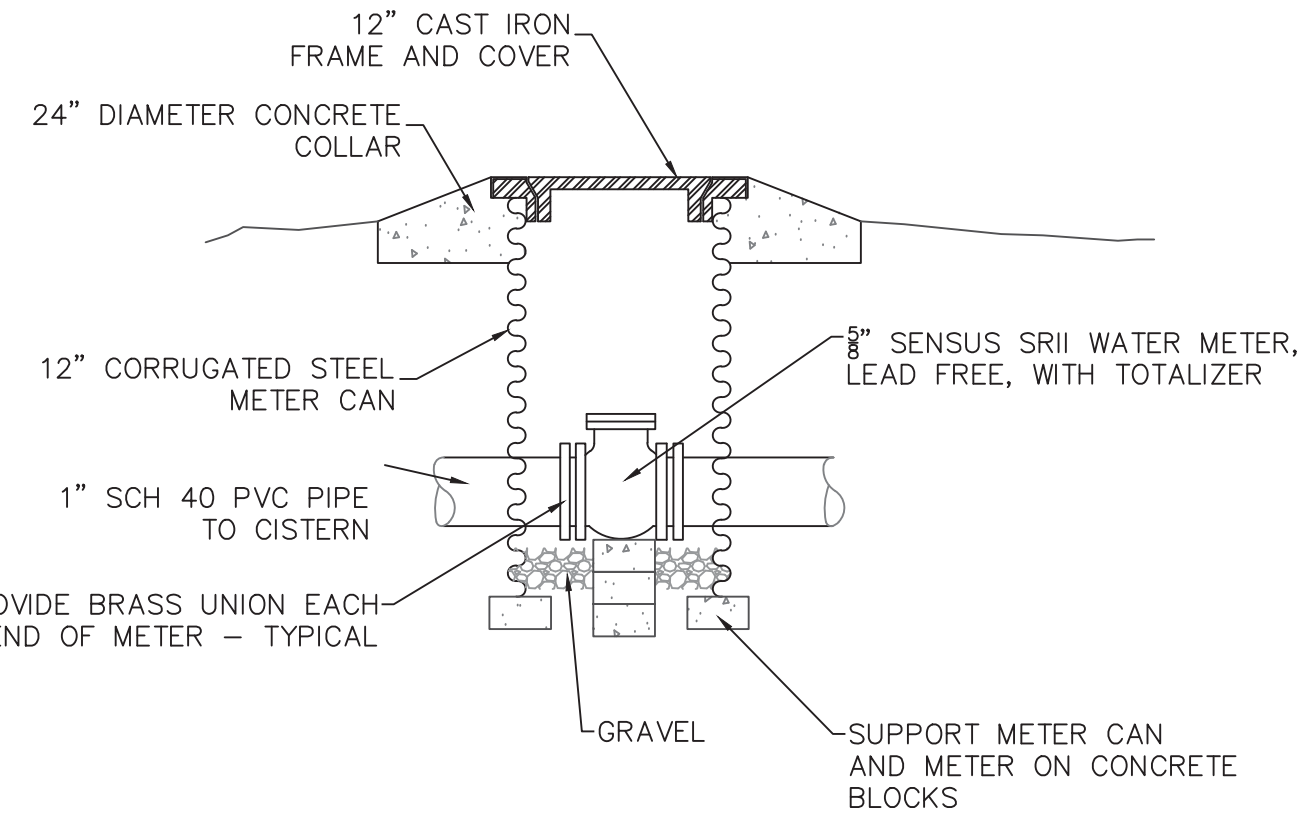
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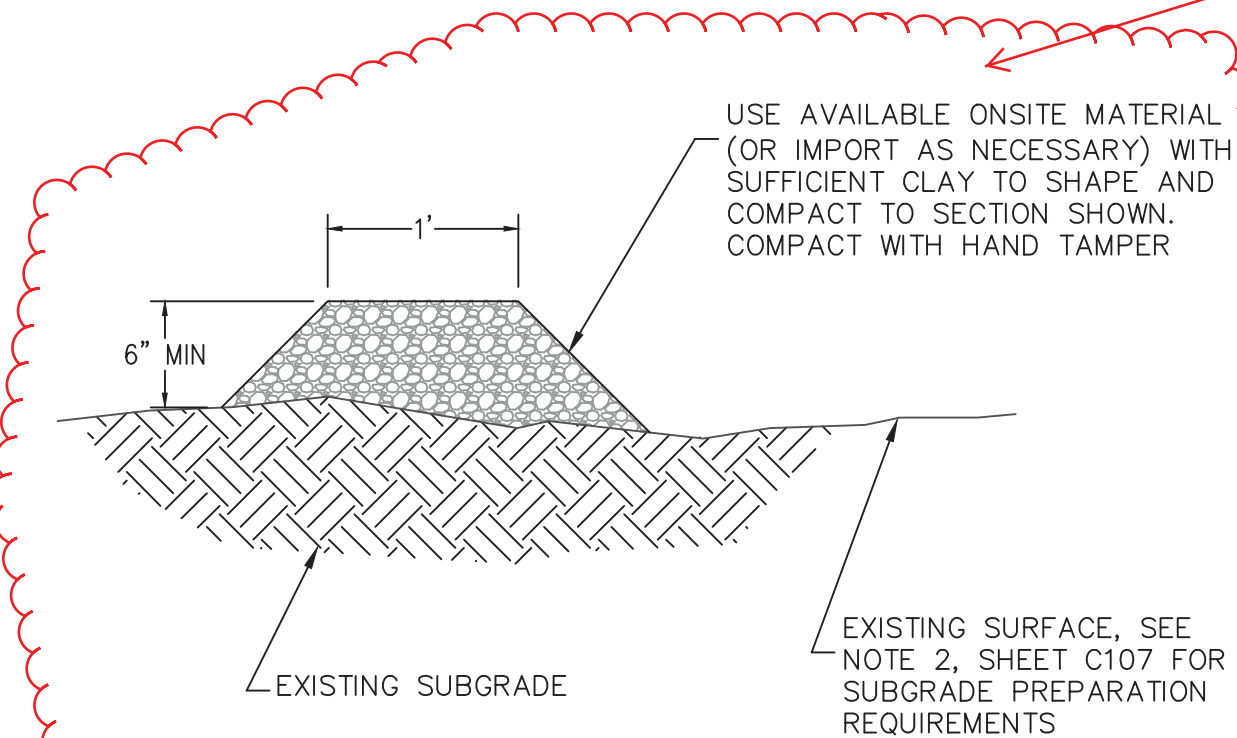
## CATCHMENT SERVICE DRAIN VALVE BOX

N.T.S.



## WATER METER DETAIL

N.T.S.



## RUN-ON DIVERSION BERM SECTION

N.T.S.

THESE "RECORD DRAWINGS WERE PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS ACTED IN GOOD FAITH AND ATTEMPTED TO COMPILE AN ACCURATE AND THOROUGH SET OF RECORD DOCUMENTS. HOWEVER, BECAUSE THESE RECORD DRAWINGS ARE BASED IN PART ON NON-VERIFIABLE INFORMATION, THE ENGINEER CANNOT WARRANT THEIR ACCURACY AND/OR COMPLETENESS AND FURTHERMORE, SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED. ANY FUTURE USERS WILL BE RESPONSIBLE FOR DETERMINING THE CORRECTNESS AND ACCURACY OF ALL INFORMATION.

BERMS DELETED BY OWNER  
 DETAIL NOT USED

12-2-2014  
 AS-BUILT PLAN  
 PREPARED  
 FROM MARK-UP  
 DRAWINGS BY  
 OTHERS

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FILE:  
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PROJECT NO:  
 BERN.C001.CRLTO Task 2

SHEET:  
 C110

CARLITO SPRINGS OPEN SPACE  
 SPRING BOX

PIPING AND EARTHWORK DETAILS

SURVEY INFORMATION / BENCH MARKS

ENGINEER SEAL

REVISIONS

NO.	DATE	REMARKS	BY
DESIGNED BY: LDR	DATE: 10/7/2013		
DRAWN BY: LDR	DATE: 10/7/2013		
CHECKED BY: AEALM/CJLDR	DATE: 10/7/2013		
		DESIGN	



STRUCTURAL GENERAL NOTES

CODES AND MANUALS:  
IBC-09 INTERNATIONAL BUILDING CODE 2009  
ASCE/SEI 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES  
AISC 360-05 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS  
AISC 341-05 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS  
AISC MANUAL OF STEEL CONSTRUCTION 13TH EDITION  
ACI 318-08 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE  
ACI 530-08 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES  
ACI 530.1-08 SPECIFICATIONS FOR MASONRY STRUCTURES

DESIGN CRITERIA:

VERTICAL:

SNOW LOAD  
GROUND SNOW LOAD PG=20 PSF  
FLAT ROOF SNOW LOAD\*\* PF=25 PSF  
SNOW EXPOSURE FACTOR CE=1.0  
SNOW LOAD IMPORTANCE FACTOR IS=1.0  
THERMAL FACTOR CT=1.0  
\*\*INCLUDES 5 PSF RAIN-ON SNOW SURCHARGE LOAD

HORIZONTAL:

WIND  
BASIC WIND SPEED 90 MPH  
WIND IMPORTANCE FACTOR IW = 1.0  
BUILDING CATEGORY I  
EXPOSURE B  
INTERNAL PRESSURE COEFFICIENT GCPI=0.18  
ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF.

GENERAL:

STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, AND LANDSCAPE DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO THE SHOP DRAWINGS AND FIELD WORK.

COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, ETC. WITH CIVIL AND LANDSCAPE DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL. THE STRUCTURAL DRAWINGS ONLY REPRESENT A PORTION OF THE REQUIREMENTS FOR THE PROJECT.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.

SHOP DRAWINGS SHALL BE FURNISHED AND REVIEWED BEFORE ANY FABRICATION OR ERECTION IS STARTED. THE CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER FOR REVIEW. POORLY EXECUTED SHOP DRAWINGS WILL BE REJECTED AND SHALL BE RESUBMITTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION.

TEMPORARY PROVISIONS SHALL BE MADE FOR STRUCTURAL STABILITY DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL CONFIGURATION. NOTCHING OR CUTTING ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED.

BACKFILL SHALL NOT BE PLACED BEHIND RETAINING WALLS UNTIL CONCRETE HAS ATTAINED 100 PERCENT OF DESIGN STRENGTH.

REMOVAL OF FORMS AND SHORING SHALL BE IN ACCORDANCE WITH ACI 347. WHERE CONCRETE MUST SUPPORT SUPERIMPOSED LOADS PRIOR TO ATTAINING THE SPECIFIED DESIGN STRENGTH, RESHORE CONCRETE IN ACCORDANCE WITH ACI 347. RESHORING SHALL NOT BE REMOVED SOONER THAN 28 DAYS FROM THE DATE OF POUR OR UNTIL CONCRETE HAS ATTAINED THE SPECIFIED DESIGN STRENGTH.

THE CONTRACTOR SHALL SUBMIT FOR PRIOR APPROVAL THE END OF POUR LOCATIONS FOR CONCRETE SLABS, CONCRETE WALLS, OR CONCRETE FOUNDATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE STANDARDS SET FORTH BY OSHA.

DRAWINGS:

DO NOT SCALE DRAWINGS.

WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED "TYPICAL" APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.

CAST-IN-PLACE CONCRETE:

ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301-05.

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.

NORMAL WEIGHT CONCRETE:  
A. F'C = 4500 PSI @ 28 DAYS - ALL CONCRETE FLAT WORK (I.E. SLABS, FOOTINGS, RETAINING WALLS, ETC.).

USE AIR-ENTRAINING ADMIXTURE IN ALL CONCRETE, EXCEPT AIR ENTRAINMENT MAY BE OMITTED FROM CONCRETE TO RECEIVE A STEEL TROWEL FINISH. SEE SPECIFICATIONS FOR AIR CONTENT REQUIREMENTS.

THE CONTRACTOR SHALL NOT CAST FOUNDATIONS, STEM WALLS OR RETAINING WALLS AGAINST EXCAVATED VERTICAL SIDE SURFACES.

ALL CONCRETE EXPOSED TO GROUND SHALL BE MANUFACTURED WITH PORTLAND CEMENT TYPE II.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08), AND DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315-99).

ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.

TENSION AND COMPRESSION LAPS IN REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318, CHAPTER 12. THE MINIMUM LAP SHALL BE MADE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS:

CONTINUOUS CONCRETE FOOTINGS AND STEM WALLS  
ALL BARS  
30 BAR DIAMETERS  
(18" MINIMUM)

CONCRETE RETAINING WALLS AND ELEVATED SLABS  
VERTICAL BARS  
NO. 6 BARS AND SMALLER 57 BAR DIAMETERS  
NO. 7 BARS AND LARGER 72 BAR DIAMETERS

HORIZONTAL BARS  
ALL BARS  
30 BAR DIAMETERS  
(18" MINIMUM)

SLABS-ON-GRADE  
ALL BARS  
30 BAR DIAMETERS  
(18" MINIMUM)

ALL HORIZONTAL REINFORCING IN FOOTINGS, WALLS AND BEAMS SHALL BE CONTINUOUS AROUND CORNERS OR HAVE BENT (CORNER) BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL BARS AND LAP 30 BAR DIAMETERS (24" MINIMUM).

CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"

B. CONCRETE CAST AGAINST FORMS BUT EXPOSED TO EARTH OR WEATHER:  
BARS LARGER THAN NO. 5: 2"

BARS NO. 5 OR SMALLER: 1 1/2"

C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: COLUMNS, GIRDERS AND BEAMS: 1 1/2"  
STRUCTURAL SLABS, WALLS AND JOISTS (NO. 11 AND SMALLER): 3/4"

FORM TIES SHALL BE EITHER OF THE THREADED OR SNAP-OFF TYPE SO THAT NO METAL WILL BE LEFT WITHIN 1 INCH OF THE SURFACE OF THE WALL. FOLLOWING REMOVAL OF FORM TIES, RECESSES ARE TO BE CAREFULLY FILLED AND POINTED WITH MORTAR.

REINFORCING SHALL NOT BE TACK WELDED OR WELDED IN ANY MANNER UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS.

BAR SUPPORTS AND SPACERS FOR REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH ACI 315-99. REINFORCING SHALL BE SECURELY TIED TO SUPPORTS.

CHAIRS WITH 22 GAGE SAND PLATES OR PRECAST BLOCKS SHALL BE PROVIDED FOR ALL REINFORCING OF CONCRETE IN CONTACT WITH GRADE.

STRUCTURAL AND MISCELLANEOUS STEEL:

ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".

ALL MISCELLANEOUS STEEL MEMBERS, SUCH AS CHANNELS, ANGLES, FLAT BARS, AND PLATES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.

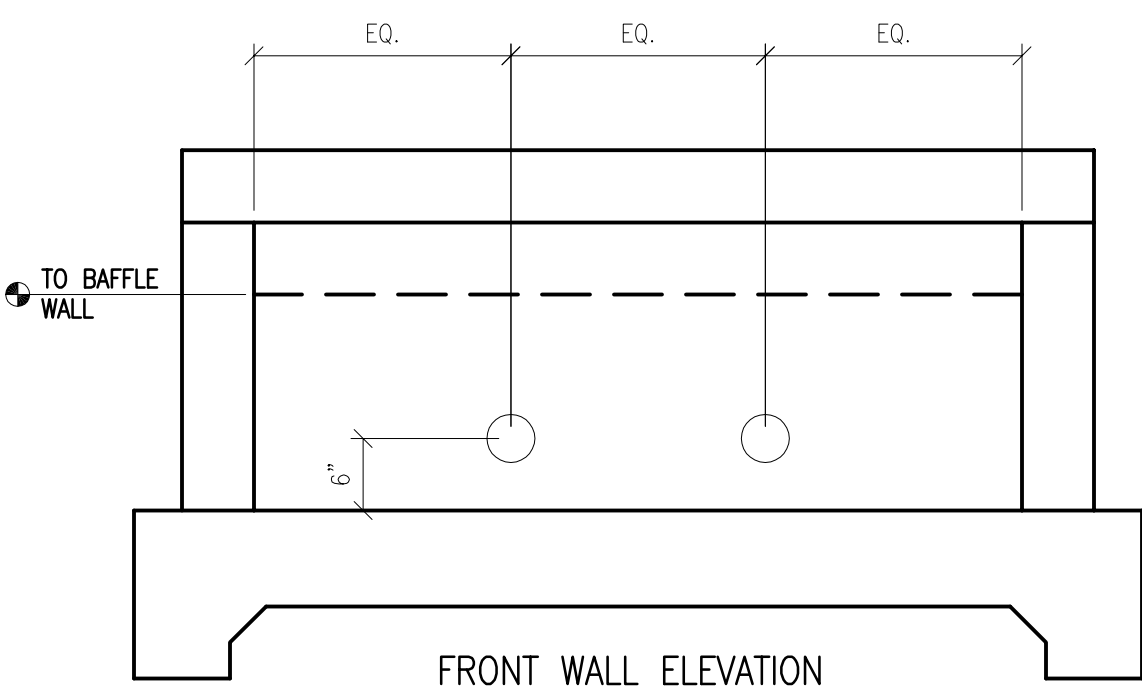
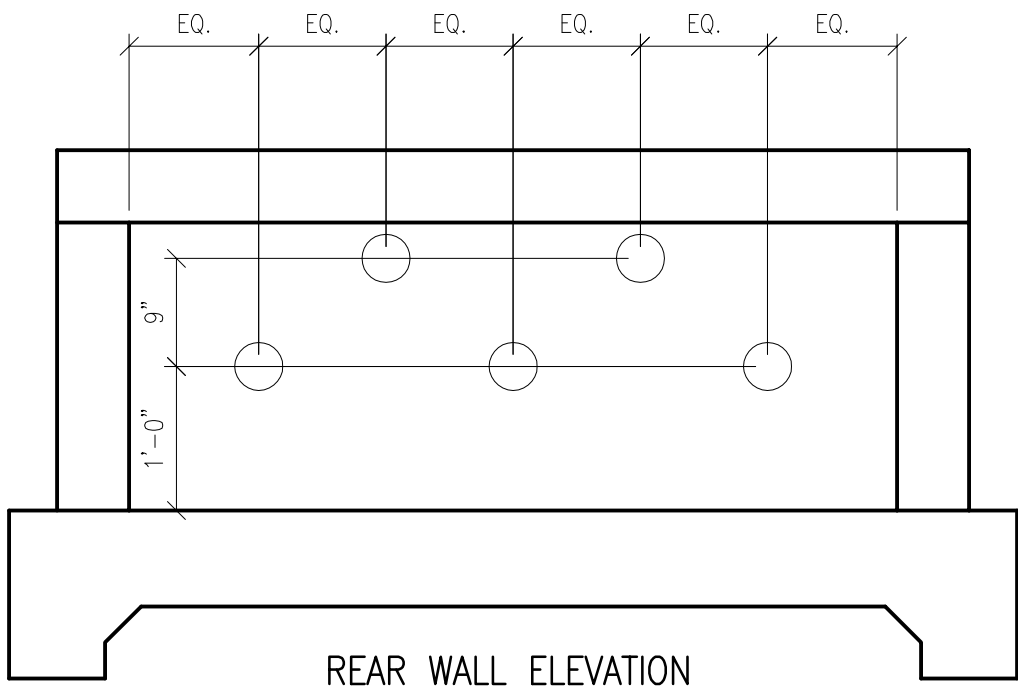
ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AWS STRUCTURAL WELDING CODE.

VENEER:

FOR STONE VENEER (5" MAXIMUM IN THICKNESS) ATTACHMENT TO STRUCTURAL CONCRETE, PROVIDE ADJUSTABLE ANCHOR TIES. ADJUSTABLE ANCHOR TIES SHALL BE CORROSION RESISTANT AND HAVE A TWO PINTLE LEADS MINIMUM WITH A MINIMUM W2.8 (3/16") WIRE. ATTACH TO CONCRETE WITH 2-1/4" DIAMETER CONCRETE SCREWS, HILTI KWIKON 11 x 1 1/2" OR APPROVED EQUAL.

SEE TYPICAL DETAILS ON SHEET S101 FOR THE SPACING.

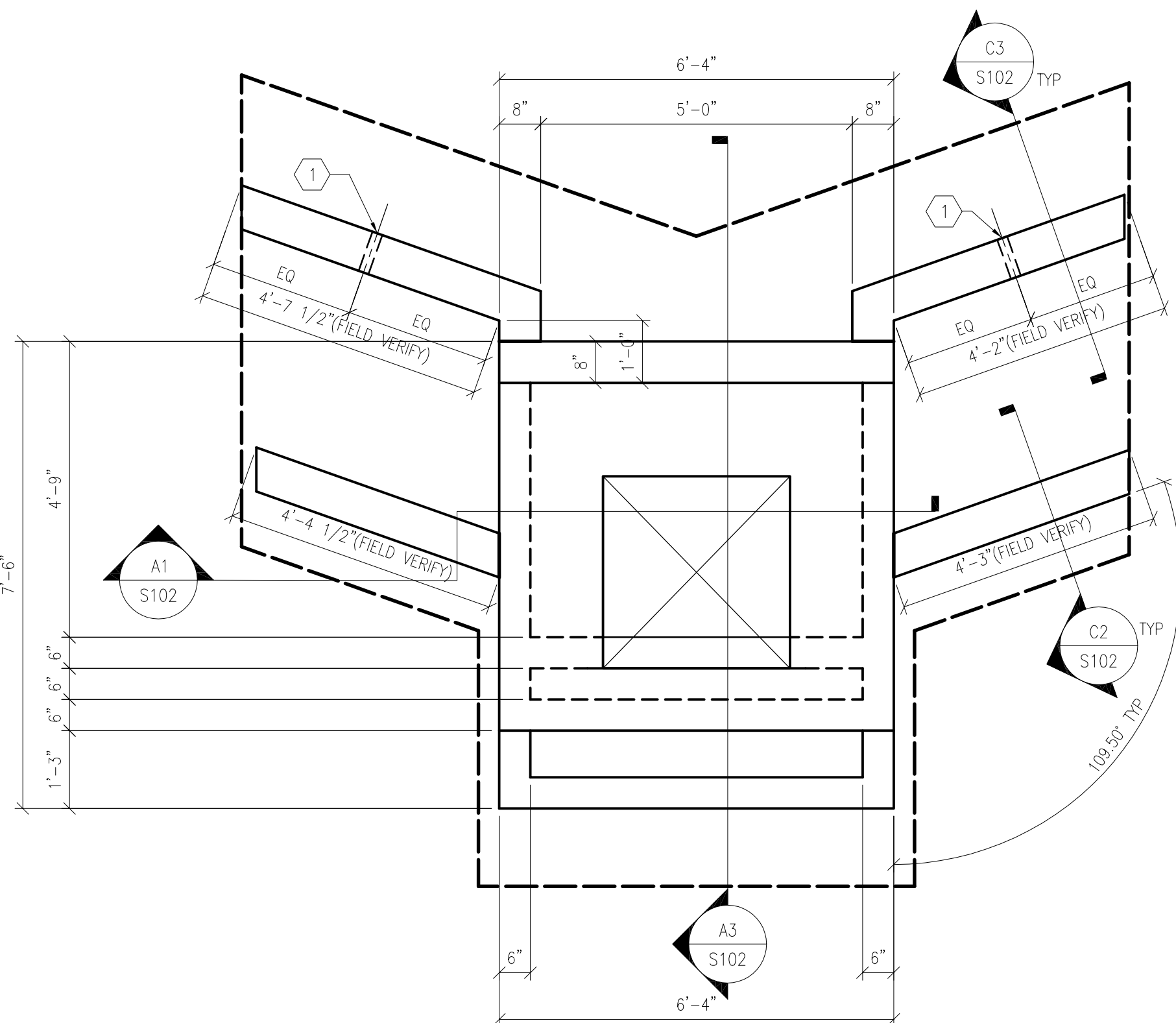
COORDINATE LOCATION OF VENEER WITH LANDSCAPE DRAWINGS.



C2

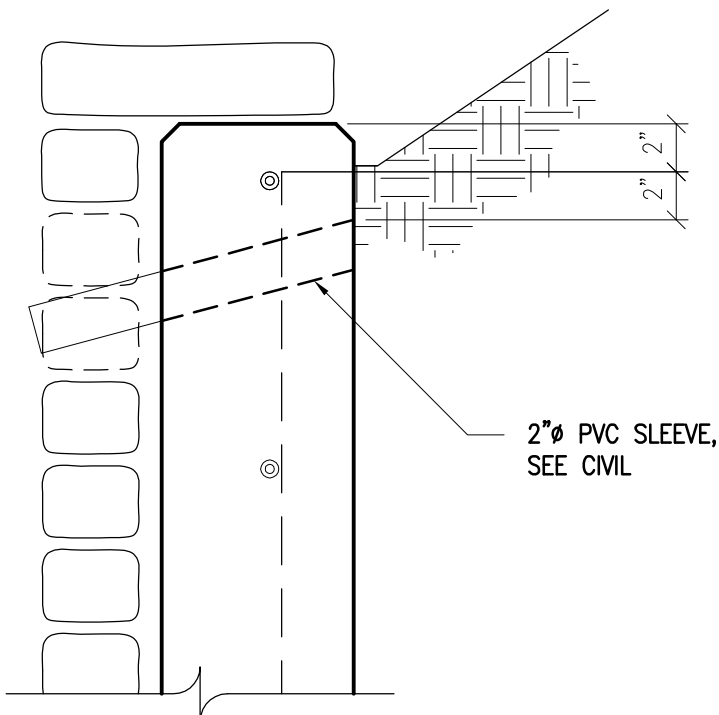
PIPE SLEEVE PLACEMENT ELEVATION

SCALE: NO SCALE



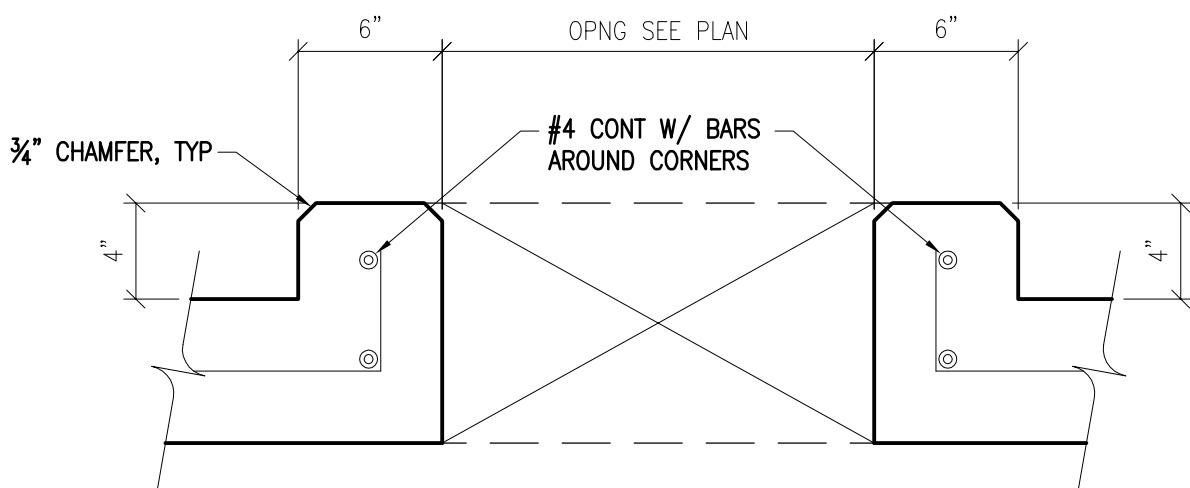
A1

SCALE: 1/4"=1'-0"



A3

SCALE: 3/4"=1'-0"



A2

SCALE: 1 1/2"=1'-0"

GENERAL NOTES

A. COORDINATE PIPE PENETRATIONS IN AND OUT OF CONCRETE SPRING BOX WITH CIVIL DRAWINGS.

KEYED NOTES

1. WEEP HOLE PIPE SEE A3/S101.

THESE RECORD DRAWINGS HAVE BEEN PREPARED FROM INFORMATION SUPPLIED BY THE CONTRACTOR AND SHALL NOT BE CONSTRUED AS A CERTIFICATION OF ACTUAL CONDITIONS BY THE ENGINEER.

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FILE:  
G:\118\1101 Carlito Springs\DWG\Carlito Springs.dwg

PROJECT NO:  
BERNC.C001.CRLTO Task 2

SHEET:  
S101

100 % CONSTRUCTION DOCUMENTS

CARLITO SPRINGS OPEN SPACE  
SPRING BOX

AS-BUILT  
FOUNDATION PLAN & SECTIONS AND GENERAL NOTES

SURVEY INFORMATION / BENCH MARKS

ENGINEER SEAL

REVISIONS

NO. DATE

AS-BUILT RECORD

REMARKS

DESIGNED BY: CR

DATE: 10/10/13

DRAWN BY: PS

DATE: 10/10/13

CHECKED BY: CR

DATE: 10/10/13

DESIGN



GENERAL NOTES

- A. COORDINATE PIPE PENETRATIONS IN AND OUT OF CONCRETE SPRING BOX WITH CIVIL DRAWINGS.

KEYED NOTES

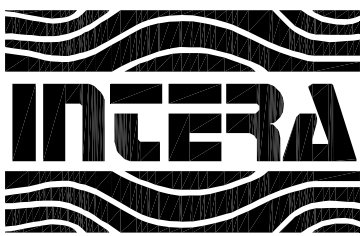
1. WATERSTOP BY CETCO, RX101.  
2. SOIL COMPACTED TO 95% MODIFIED PROCTOR OR ON BEDROCK.

THESE RECORD DRAWINGS HAVE BEEN PREPARED FROM INFORMATION SUPPLIED BY THE CONTRACTOR AND SHALL NOT BE CONSTRUED AS A CERTIFICATION OF ACTUAL CONDITIONS BY THE ENGINEER.

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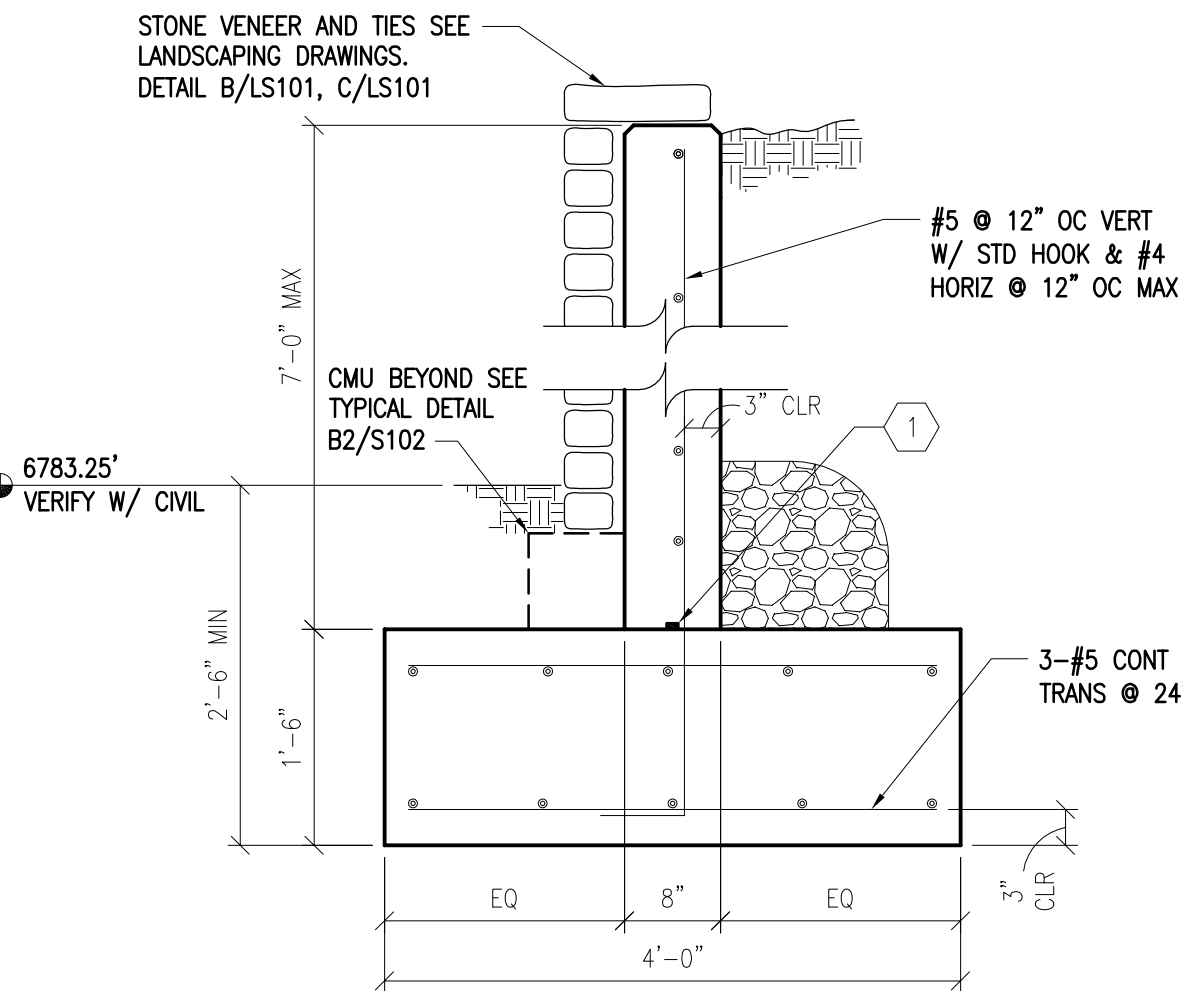


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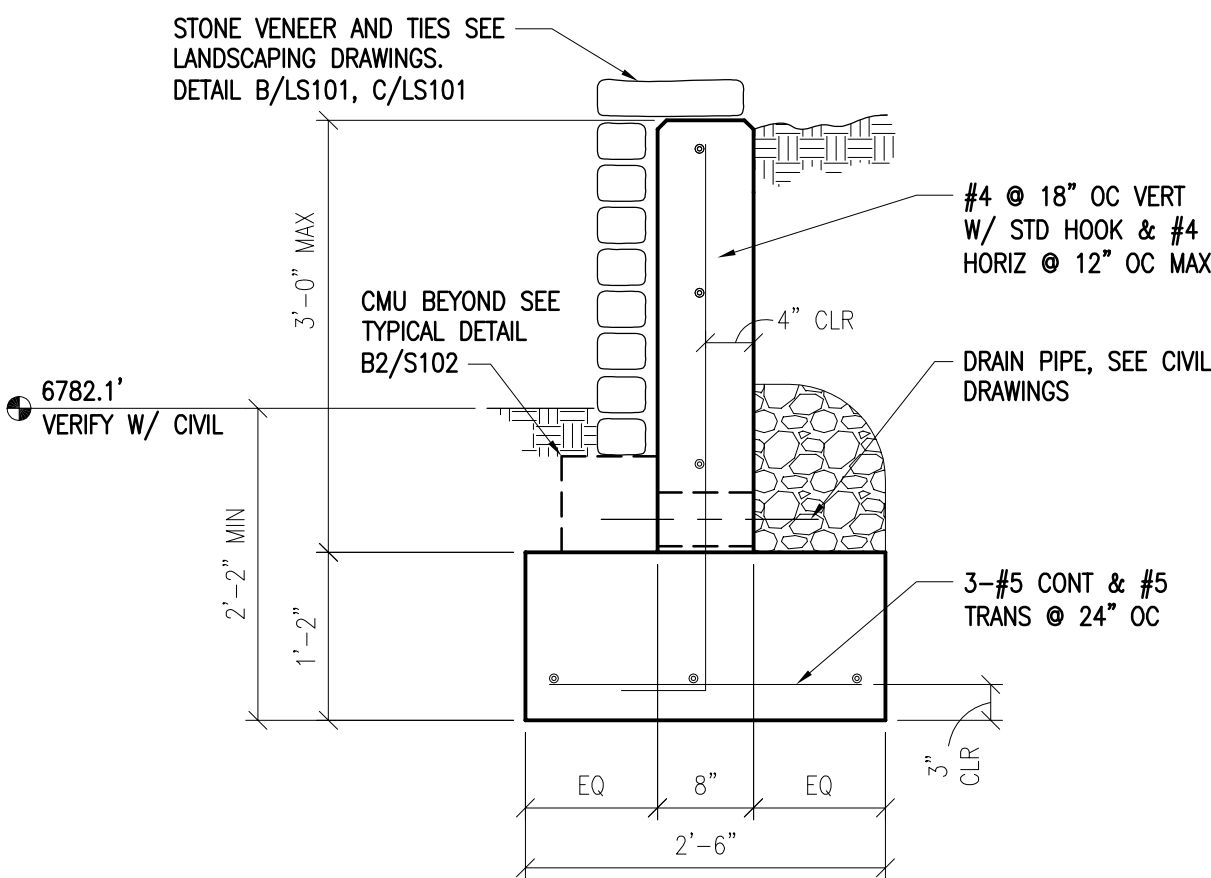
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PROJECT NO:  
BERNC.C001.CRLTO Task 2

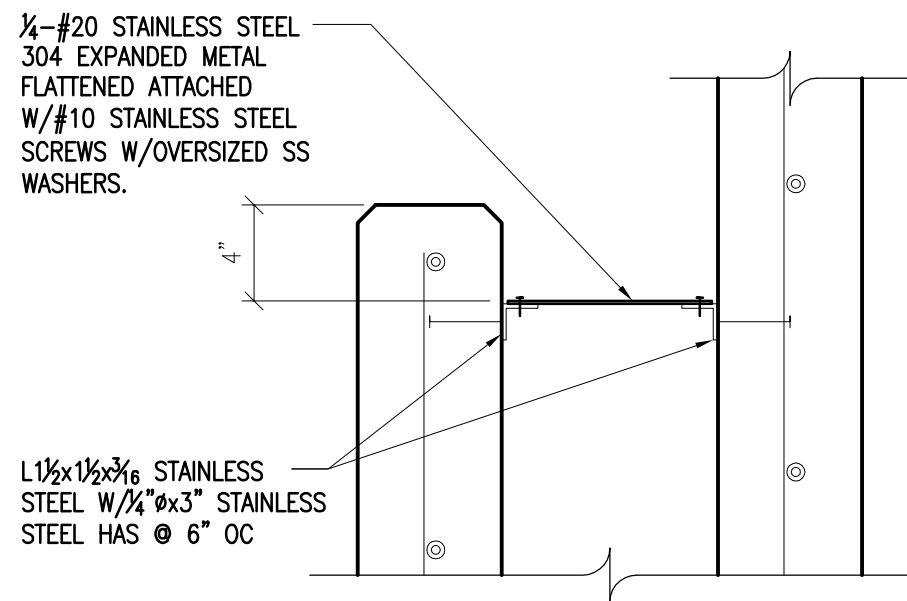
SHEET:  
S102



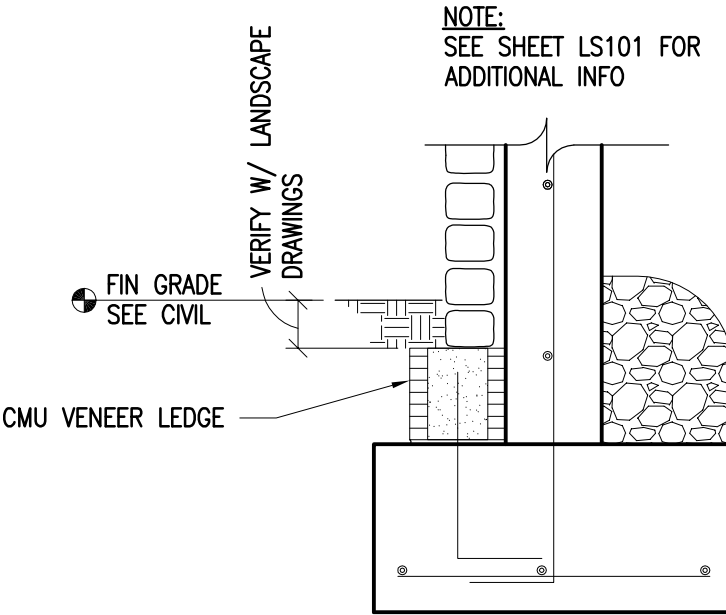
C3 REAR WING WALL SECTION  
SCALE: 3/4"=1'-0"



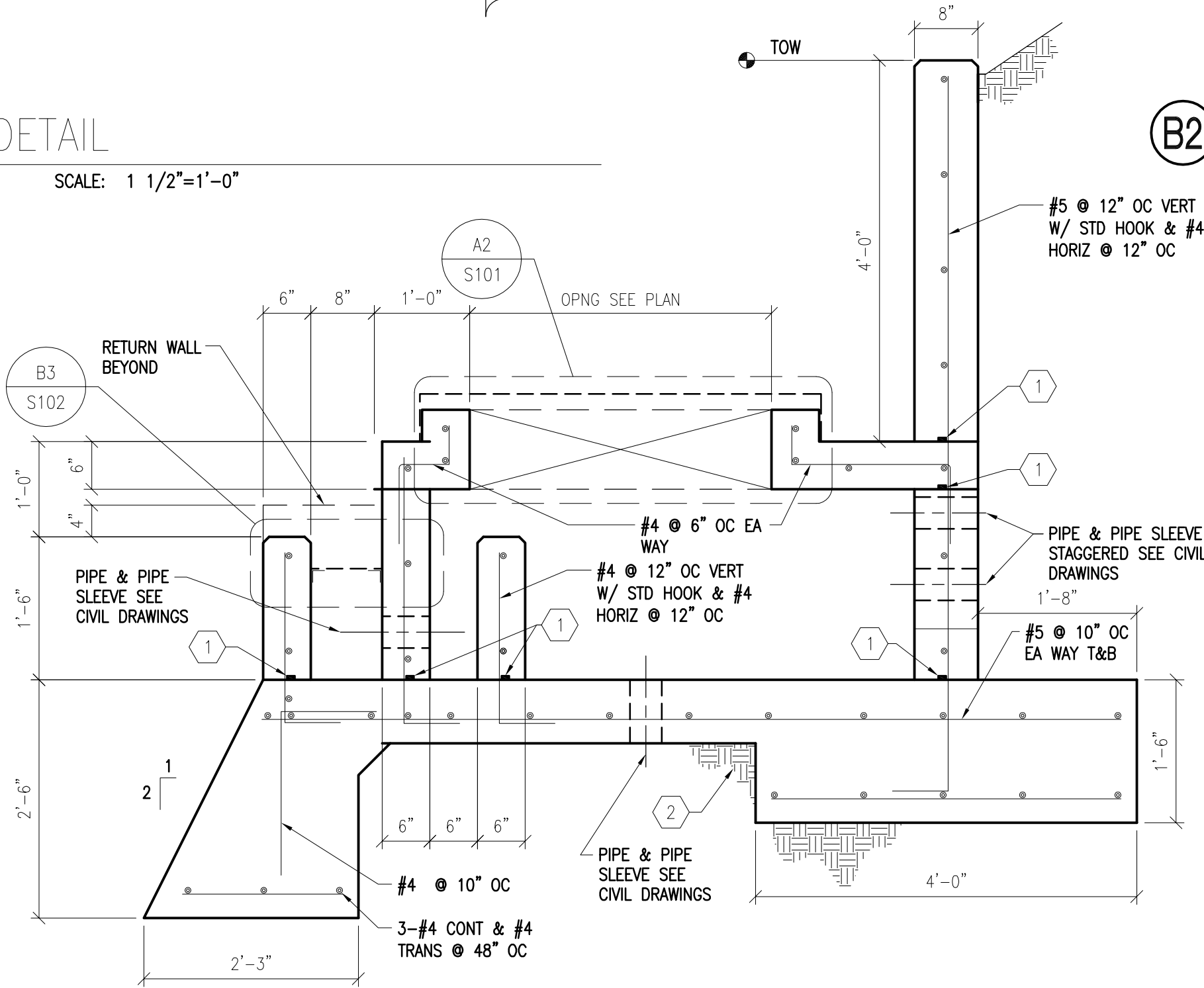
C2 FRONT WING WALL SECTION  
SCALE: 3/4"=1'-0"



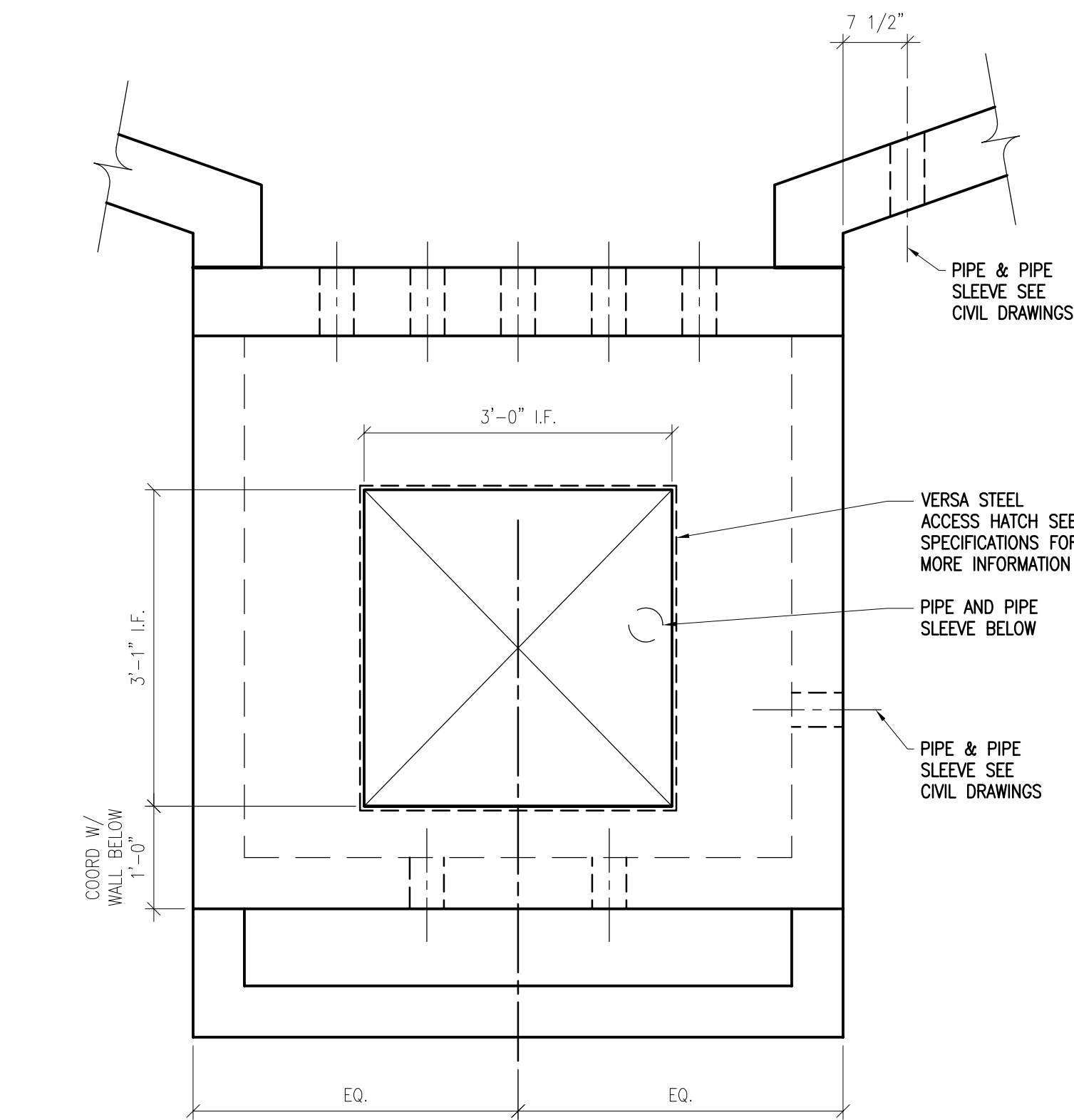
B3 DETAIL  
SCALE: 1 1/2"=1'-0"



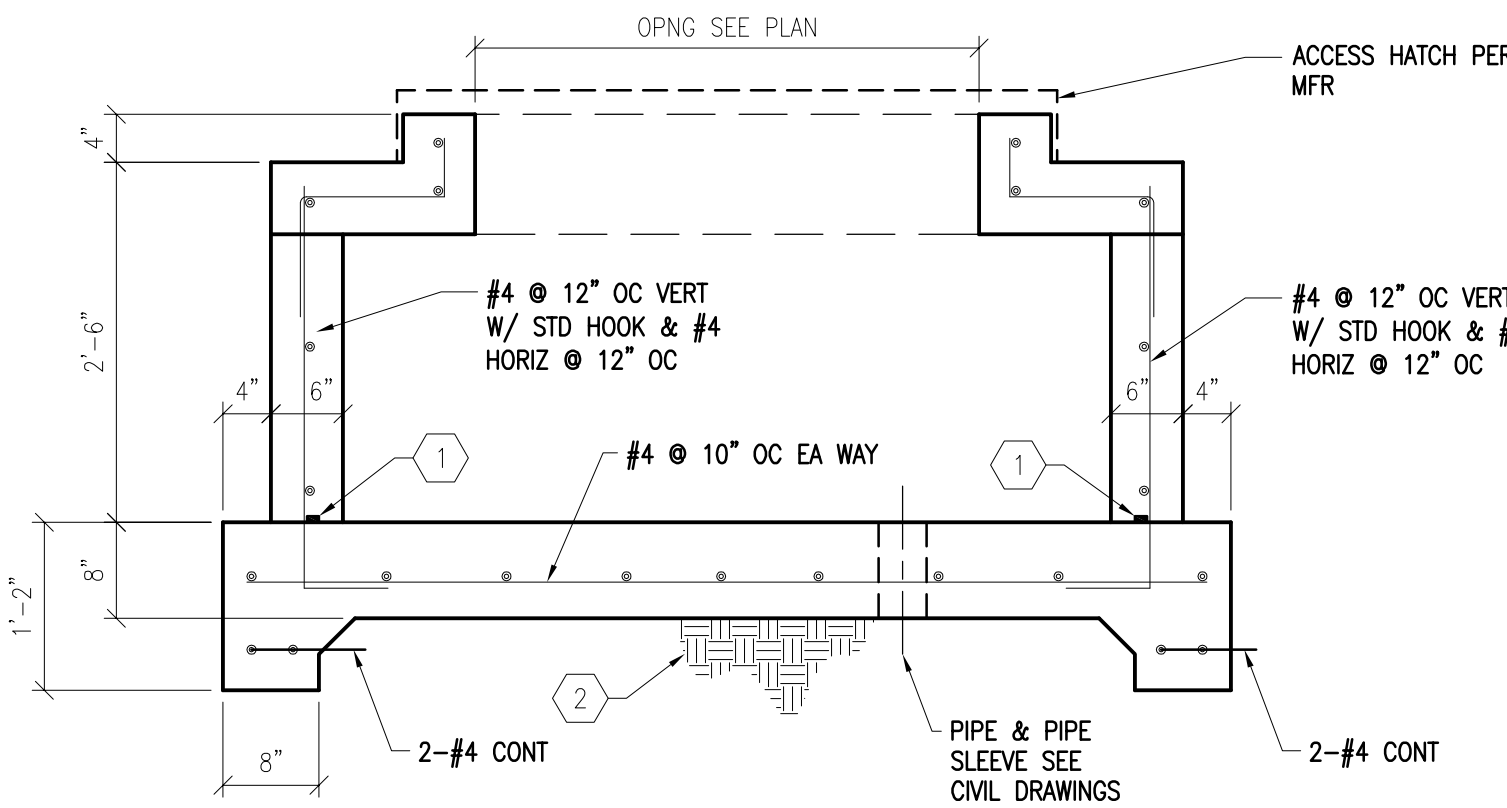
B2 TYPICAL VENEER LEDGE DETAIL  
SCALE: 3/4"=1'-0"



A3 SPRING BOX SECTION  
SCALE: 3/4"=1'-0"

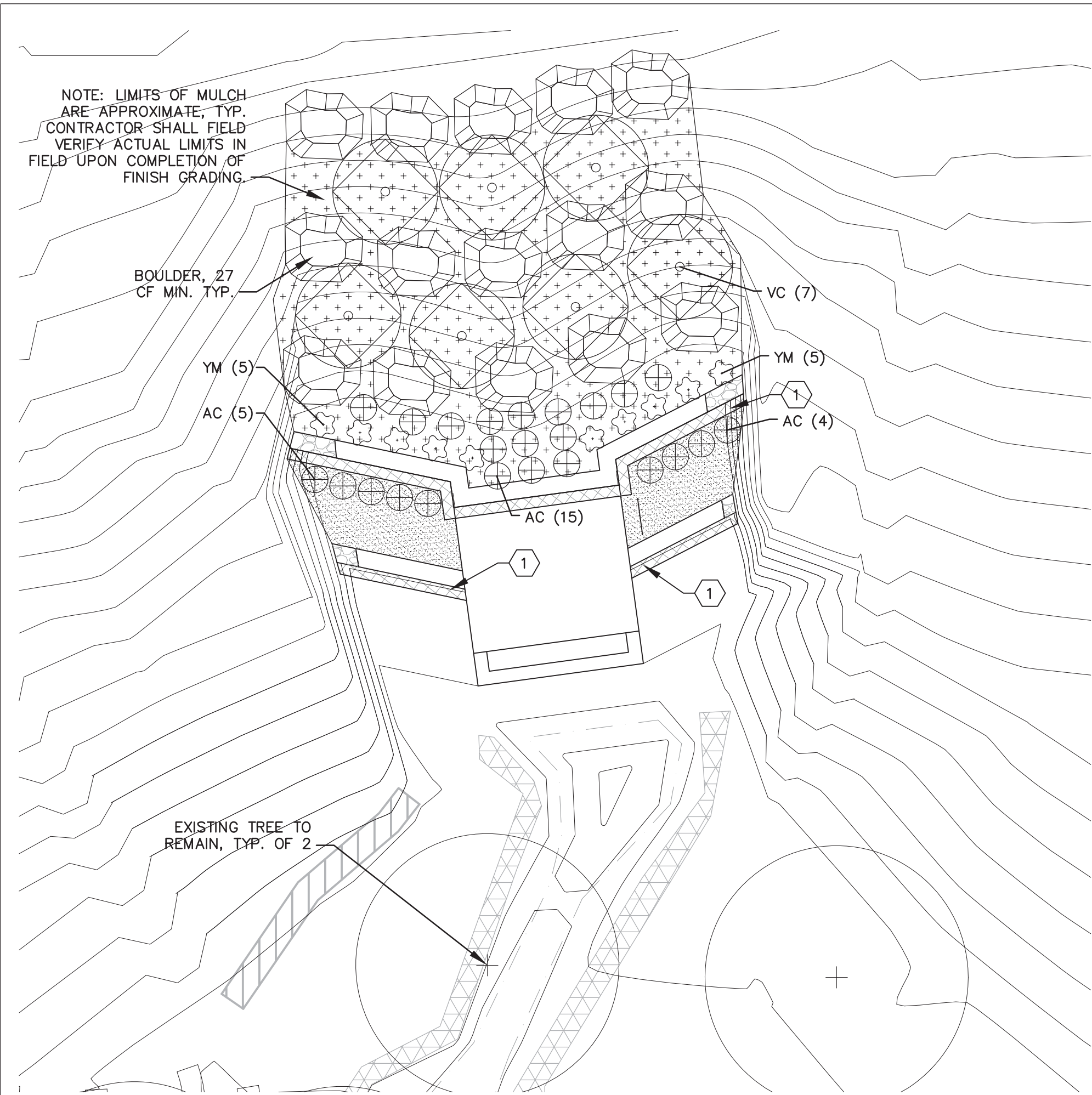


A1 SPRING BOX SECTION  
SCALE: 3/4"=1'-0"



A2 ROOF PLAN VIEW  
SCALE: 3/4"=1'-0"





### PLANT LEGEND

KEY	COMMON NAME	BOTANICAL NAME	QTY	INSTALLED SIZE	REMARKS
AC	COLUMBINE	AQUILEGIA CHRYSANTHA	24	MIN. 12" HT.	1 GALLON
VC	VIRGINIA CREEPER	PARTHENOCISSUS QUINQUEFOLIA	7	MIN. 18" SPD.	1 GALLON
YM	YERBA MANSA	ANEMOPSIS CALIFORNICA	10	MIN. 12" SPD.	1 GALLON

### HATCH LEGEND

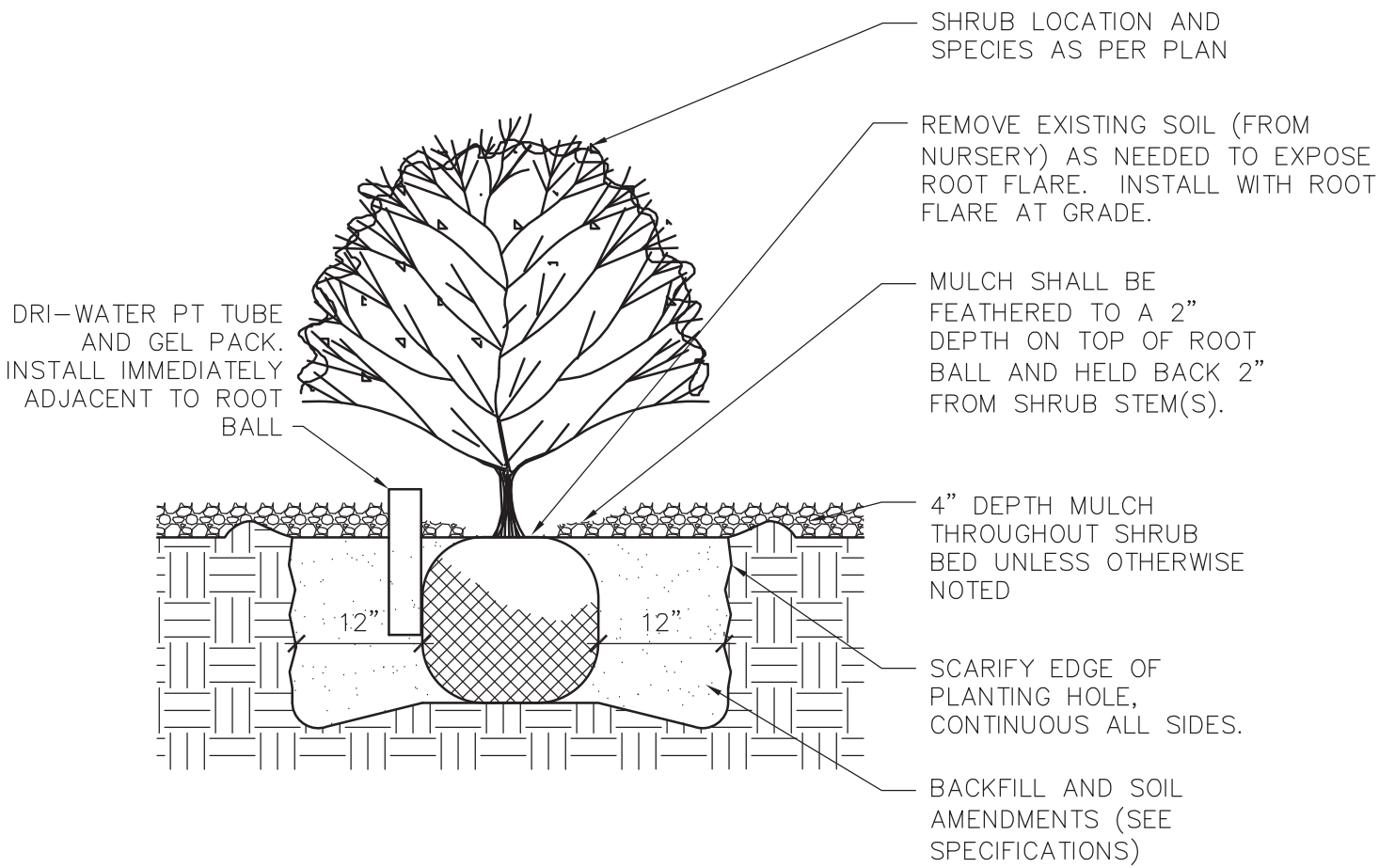
- 2"-4" ANGULAR GRAVEL MULCH, BUILDODOGY BROWN.
- 1" ANGULAR GRAVEL MULCH, BUILDODOGY BROWN.

### PLANTING NOTES

- GRAVEL MULCH SHALL BE INSTALLED AT A 4" DEPTH OVER FILTER FABRIC. FILTER FABRIC SHALL BE MIN. 4 OZ. NON-WOVEN NEEDLE PUNCHED POLYPROPYLENE (MIRAFI 140N OR EQUIVALENT). OVERLAP ENDS 3", TURN DOWN EDGES 6". THE TOP OF MULCH SHALL BE 1" BELOW TOP OF ADJACENT CONCRETE SURFACES.
- SHRUBS SHALL BE INSTALLED PER DETAIL A/LS101.
- IF THERE IS A DISCREPANCY IN THE FIELD OR NURSERY BETWEEN THE CONTAINER SIZE CALLED OUT UNDER "REMARKS" AND HEIGHT & SPREAD CALLED OUT UNDER "SIZE", THE SPECIFIED PLANT MUST MEET HEIGHT & SPREAD REQUIREMENTS SPECIFIED UNDER "SIZE", EVEN IF A LARGER CONTAINER SIZE IS REQUIRED TO MEET THESE SPECIFICATIONS. AT NO ADDITIONAL COST TO THE OWNER.
- PLANTS SHALL BE IRRIGATED WITH DRI-WATER GEL WATERING SYSTEM. CONTRACTOR SHALL INSTALL ONE DRI-WATER PT DELIVERY SYSTEM AT EACH PLANT. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING DRI-WATER GEL TO PLANTS DURING WARRANTY PERIOD.
- ALL TREES NOT INDICATED TO BE REMOVED SHALL REMAIN (TYP.) CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES TO REMAIN FROM DAMAGE BY DEMOLITION AND CONSTRUCTION OPERATIONS. ANY TREE DAMAGED BY DEMOLITION OR CONSTRUCTION OPERATIONS SHALL BE REPLACED WITH A TREE OF THE SAME SPECIES AND SIZE. IF SIZE OF EXISTING TREE IS NOT AVAILABLE CONTRACTOR SHALL REPLACE WITH A 2" CAL. TREE (DECIDUOUS) OR 6' HT. TREE (EVERGREEN) AND SHALL PROVIDE A CREDIT TO THE OWNER FOR THE MONETARY DIFFERENCE IN VALUE.

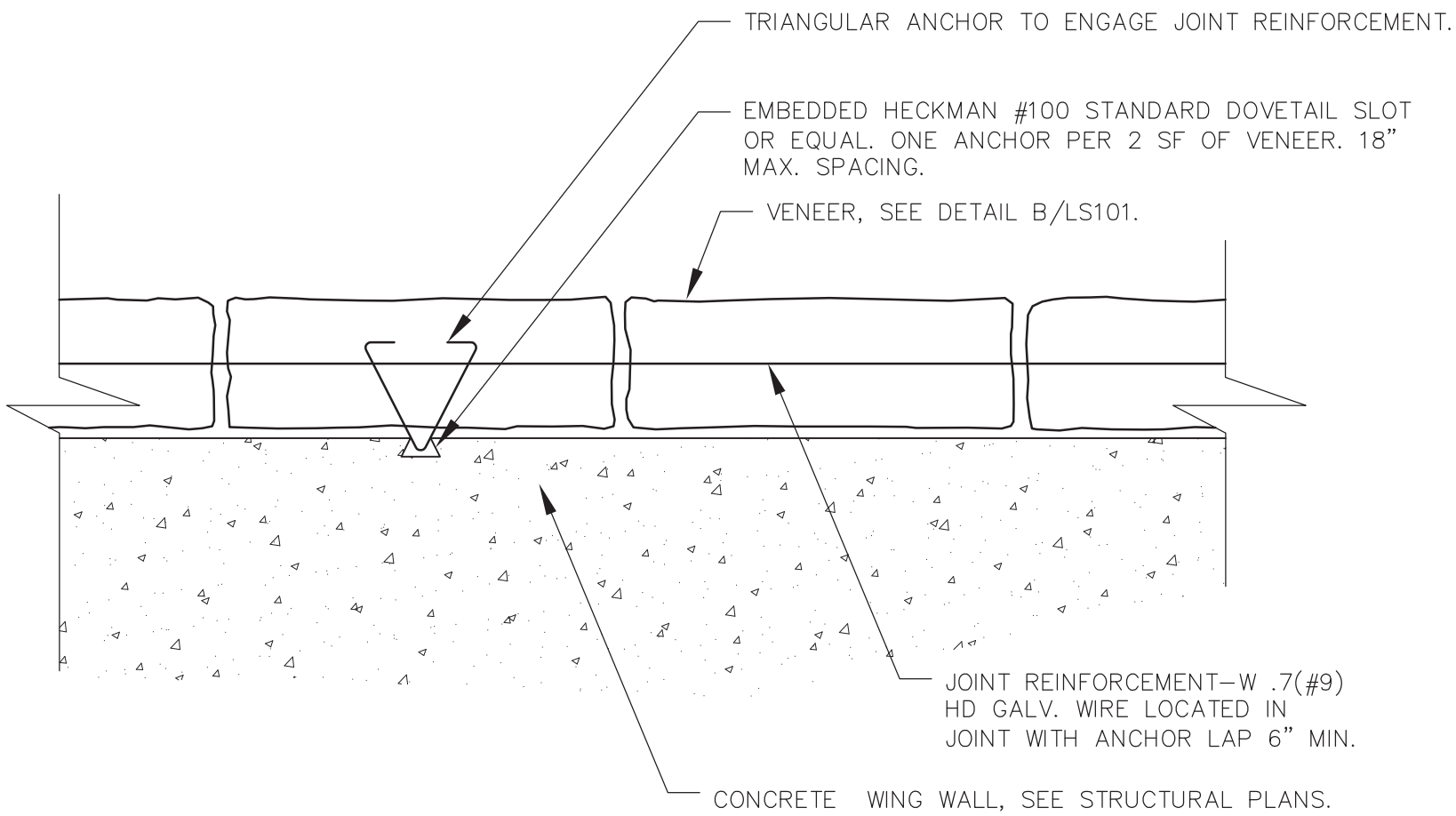
### KEYED NOTES

- INSTALL STONE VENEER ON CONCRETE WING WALL. STONE USED FOR VENEER SHALL BE NATURAL LIMESTONE TO MATCH THAT FOUND ON SITE IN SIZE AND COLOR AS AVAILABLE FROM SKYLINE GROUP SERVICES AND WHOLESALE LLC (CONTACT WENDELL WILLIAMS - (505)-903-3561). SEE STRUCTURAL PLANS AND DETAILS B/LS101 AND C/LS101.



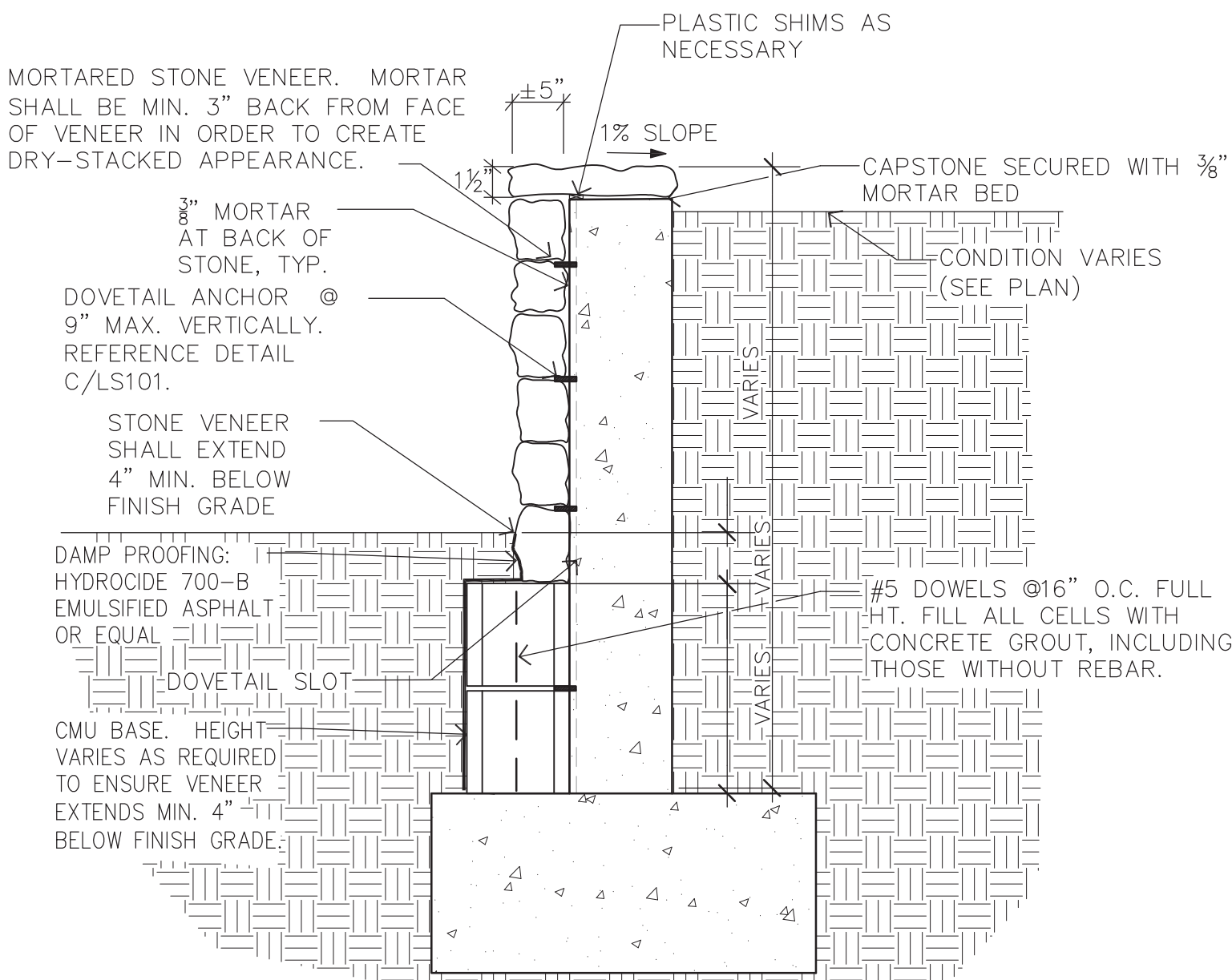
### A SHRUB PLANTING

SCALE: N.T.S.



### C VENEER PLAN VIEW

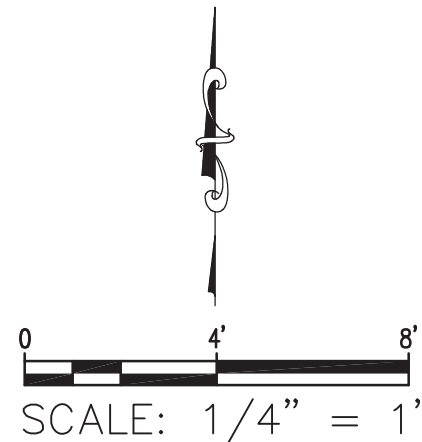
SCALE: 1-1/2" = 1'



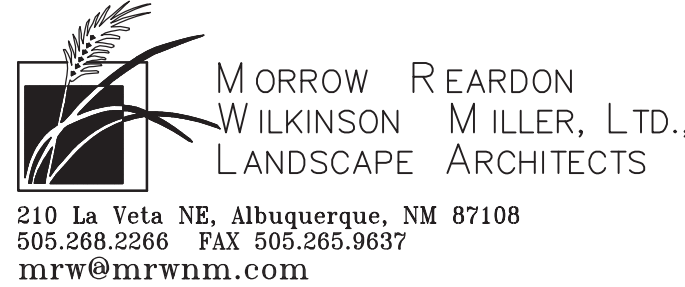
- NOTES:
- VENEER STONE SHALL BE NATURAL LIME STONE TO MATCH THAT FOUND ON SITE IN MATERIAL, COLOR, AND SIZE AND SHALL HAVE A DRY-STACKED APPEARANCE TO MATCH EXISTING DRY STACKED WALL ON SITE. SEE IMAGE 6/C102. CONTRACTOR SHALL SUBMIT PROPOSED VENEER STONE TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF VENEER.
  - JOINT MORTAR TO BE STD. GREY.

### B STONE VENEER ON SPRINGBOX

SCALE: 1" = 1'



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FILE:

PROJECT NO:  
BERNC.C001.CRLTO Task 2

SHEET:  
LS101

SURVEY INFORMATION / BENCH MARKS

- This map complies with National Map Accuracy Standards based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.
- Aerial photography exposed on October 31, 2011 by New Mexico Aerial Surveys, Inc., Albuquerque, NM, using a Zeiss Top 15 aerial mapping camera with a calibrated focal length of 152.76 mm.
- Orthophoto produced by Thomas R. Mann & Assoc., Inc., Albuquerque, NM.
- 2007 grid based on field survey data furnished by Surveying Control, Inc., Albuquerque, NM.
- Coordinates are ground modified New Mexico State Plane Coordinates East Zone, NAD 83 (NAD83/2007), and have been adjusted to the NGS GPS Control Point "JALAIR". To obtain true State Plane grid coordinates, multiply coordinates by project average combined factor CF=0.999855453. Elevations are NAVD 88, and have been adjusted to the NGS 1st. order benchmark "Z 353". Coordinates and elevations are expressed in U.S. Survey Feet.

ENGINEER SEAL



REVISIONS

WM	BY	DATE	REMARKS
10/3/14	WM/BHM	10/3/14	DESIGNED BY: WM/BHM
	WM	10/3/14	DRAWN BY: WM
	BHM	10/3/14	CHECKED BY: BHM
DESIGN			

CARLITO SPRINGS OPEN SPACE  
SPRING BOX

AS-BUILT  
LANDSCAPE PLAN AND VENEER DETAILS